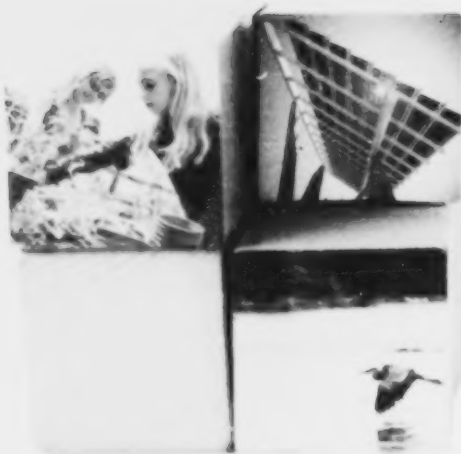


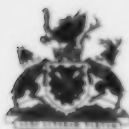
Building Resilience

Annual Report 2008/2009



Environmental
Commissioner
of Ontario

Environmental
Commissioner
of Ontario



Commissaire à
l'environnement
de l'Ontario

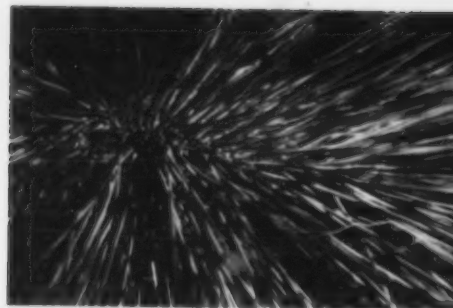
Gord Miller, B.Sc., M.Sc.
Commissioner

Gord Miller, B.Sc., M.Sc.
Commissaire

October 2009

The Honourable Steve Peters
Speaker of the Legislative Assembly of Ontario

Room 180, Legislative Building
Legislative Assembly
Province of Ontario
Queen's Park



Dear Speaker,

In accordance with Section 58 of the *Environmental Bill of Rights, 1993*, I am pleased to present the 2008/2009 Annual Report of the Environmental Commissioner of Ontario for your submission to the Legislative Assembly of Ontario.

Sincerely,

Gord Miller
Environmental Commissioner of Ontario

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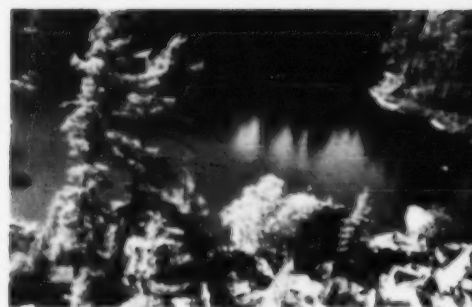


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Commissioner's Message: Building Resilience

Resilience is a concept that has its origins in the science of ecology. It was first explained and championed in the dominant western culture by C.S. Holling in the 1970s, but the Haudenosaunee (in their Great Law of Peace) or perhaps some other Aboriginal culture probably have the prior claim.

The theme of this report is an attempt to introduce the term "resilience" into the lexicon of those of us concerned about the sustainability of our ecological systems, and the human socio-economic systems that operate within it. It's not a new word in the sense of its general usage, where we use the word "resilient" to describe materials (like rubber) that spring back to their original form, or a friend who rapidly recovers from an illness. The usage we adopt within this report, when we talk about our ecological and socio-economic systems, implies much more than just these basic meanings.

In this ecological sense, systems that are resilient are those that can tolerate disturbance or disruption without totally collapsing and becoming something else, something governed by different rules or conditions. It doesn't mean that these systems never change, never break down: they do. Mature old growth pine forests in Northern Ontario burn to ashes in massive fires every few centuries. What makes those ecosystems resilient is that the same forests grow back. The inherent capacity for systems to repair or rebuild themselves is an essential attribute of resilient systems.

So why, at this time, do I thrust upon you poor readers an arcane concept that has lurked in the dank halls of ecological academia for almost four decades? Because I think, as the Walrus said, "The time has come..." And that is because many of the systems that we have relied upon to define our way of life (our forests, the Great Lakes, our soils, our climate) are suffering perturbations of which the ultimate consequences are unknown.

Most notably of these is our economic system. At time of writing (Fall 2009), it is still too early to know the full seriousness of the financial calamity that has struck the global economy, and too soon to get a sense of the resilience of the economic system. But one thing is clear: The economy and all these systems are far too complex to predict with any certainty – and the one thing you can expect from complex systems is the unexpected (as our once Wall Street Gurus have learned). You can't know what will happen; all you can do is work to make the system as resilient as possible, so that it will rebuild itself and restore desirable functioning.

So perhaps we should not attempt to manipulate or manage or fix the complex systems that shape our society; that really can't be done. Rather our task is to build resilience where we can and when we can to the extent we understand it. And we do understand a few things:

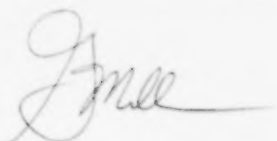
We know that resilient systems rely on redundancy of components to assure functioning. In living systems, the diversity of species plays this role. To the extent that we allow species to be lost, we lessen the resilience of that ecosystem. It is interesting that we have learned that in complex human machines like spacecraft, there must be redundancy in the system, yet in our economic pursuits, to be "redundant" has a negative connotation implying inefficiency or uselessness.

We know that resilient systems accumulate reserves, and utilize them to weather disturbances or even major perturbations. Plants and animals store energy and nutrients for hard times. Seed banks accumulate in ecosystem soils, remaining dormant for years until conditions dictate their germination. In our economic systems, reserves are an unacceptable inventory cost. We work with borrowed money and get our essential supplies "just in time."

"We have been so consumed by the idea that 'growth' is essential that our efforts at sustainability have been toward building new sustainable stuff so we can grow. Maybe this is not the right way to look at it."

Resilient complex systems self-organize and grow to a size and magnitude appropriate to the resources and energy flow available. They then oscillate in some dynamic equilibrium (like a tropical rainforest) or reset the cycle (like the fires that renew the boreal forest). In contrast, our economic models say that the economy can grow forever at a compounding rate, unlimited by energy or resource constraints. (At least, that's what they thought).

We have talked for many years about the need for "sustainable development" or, more recently, just "sustainability" – since we seem to have the "development" stuff figured out. But the path to sustainability often seems to have eluded us. Perhaps this is because our paradigm has been wrong. We have been so consumed by the idea that "growth" is essential that our efforts at sustainability have been toward building new sustainable stuff so we can grow. Maybe this is not the right way to look at it. We already have an elaborate infrastructure operating within a number of complex social-ecological systems. It's not about making it all new; it's about building resilience into what we have and what we do. And in this report I hope you the reader sees some opportunities in that regard.



Gord Miller
Environmental Commissioner of Ontario

Part 1: The *Environmental Bill of Rights*



The *Environmental Bill of Rights, 1993* (EBR) gives the people of Ontario the right to participate in decisions that affect the environment made by ministries prescribed under the Act. The EBR helps to make ministries accountable for their environmental decisions, and ensures that these decisions are made in accordance with the goal all Ontarians hold in common — to protect, conserve, and restore the natural environment for present and future generations. The provincial government has the primary responsibility for achieving this goal, but the EBR provides the people of Ontario with the means to ensure it is achieved in a timely, effective, open and fair manner.

The EBR gives Ontarians the right to

- comment on environmentally significant ministry proposals,
- ask a ministry to review a policy, Act, regulation or instrument,
- ask a ministry to investigate alleged harm to the environment,
- appeal certain ministry decisions, and
- take court action to prevent environmental harm.

Statements of Environmental Values

Each of the ministries subject to the EBR has prepared a Statement of Environmental Values (SEV). The SEV guides the minister and ministry staff when they make decisions that might affect the environment.

Each SEV should explain how the ministry will consider the environment when it makes an environmentally significant decision, and how environmental values will be integrated with social, economic and scientific considerations. Each minister makes commitments in the ministry's SEV that are specific to the work of that particular ministry.

The Environmental Commissioner and the ECO Annual Report

The Environmental Commissioner of Ontario (ECO) is an independent officer of the Legislative Assembly and is appointed for a five year term. The Commissioner reports annually to the Legislative Assembly — not to the governing party or to provincial ministries.

In the Annual Report to the Ontario Legislature, the Environmental Commissioner reviews and reports on the government's compliance with the EBR. The ECO and staff carefully review how ministers exercised discretion and carried out their responsibilities during the year in relation to the EBR, and whether ministry staff complied with the procedural and technical requirements of the law. The actions and decisions of provincial ministers are monitored to see whether they are consistent with the ministries' SEVs (see Part 8.2 of this Annual Report).

A glossary of key terms used in the Annual Report is available on the ECO website at www.eco.on.ca. Finally, a Supplement to the report provides further detail on the EBR activity during the reporting period.

The Environmental Registry

The Environmental Registry is the primary mechanism for the public participation provisions of the *Environmental Bill of Rights*. The Registry is an Internet site where ministries are required to post notices of environmentally significant proposals. The public has the right to comment on the proposals before decisions are made, and ministries must consider these comments when they make their final decisions and explain how the comments affected their decisions. For complete information on the Environmental Registry and the ECO's evaluation of its use by the prescribed ministries, see Part 7 of this Annual Report.

The Registry can be accessed at: www.ebr.gov.on.ca

Ministries Prescribed Under the *EBR**

Agriculture, Food and Rural Affairs (OMAFRA)
Culture (MCL)
Economic Development (MED)
Energy and Infrastructure (MEI)
Environment (MOE)
Government Services (MGS)
Health and Long-Term Care (MOHLTC)
Labour (MOL)
Municipal Affairs and Housing (MMAH)
Natural Resources (MNR)
Northern Development and Mines (MNDM)
Tourism (TOUR)
Transportation (MTO)

* In late June 2009, the Ontario government announced Cabinet changes affecting two ministries subject to the *EBR*. Responsibility for certain parts of forest industry Management was moved from the Ministry of Natural Resources to the new Ministry of Northern Development, Mines and Forestry (MNDMF). The Consumer Services portfolio (including oversight of the Technical Standards and Safety Authority) was transferred from the Ministry of Small Business and Consumer Services to the newly created Ministry of Consumer Services (MCS). For the sake of clarity, this Annual Report uses the ministry names and abbreviations that applied during the 2008/2009 reporting period. MOE has advised the ECO that O. Reg. 73/74 (which lists those ministries and Acts prescribed under the *EBR*) will be updated in late 2009 to reflect the new ministry names.

1.1 The ECO Recognition Award

Each year, the Environmental Commissioner of Ontario (ECO) invites ministries to submit programs and projects for special recognition. The ECO's Recognition Award is intended to acknowledge those ministries that best meet the goals of the *Environmental Bill of Rights* or that use the best internal *EBR* practices. This past year, six ministries responded to our call for nominations, submitting a total of 25 projects for consideration.

An arm's-length panel reviewed the list of submissions.

This year's ECO Recognition Award is being presented to staff of the Ministry of the Environment (MOE) for their Project Green initiative. MOE staff sought to lessen the ministry's environmental impact by focusing on its own internal practices, such as the greening of building operations, energy conservation, and waste diversion. There are many notable successes of this initiative, ranging from several carbon-neutral offices to the ministry now having 114 hybrid vehicles in its fleet. Staff responsible for Project Green have played an important leadership role; they have been able to channel individual MOE staff concerns and desires into collective action that has delivered measureable results. MOE staff delivered more than 40 presentations to approximately 2,000 Ontario Public Service staff, established 16 greening committees across MOE, generated more than 1,500 submissions on ideas to green the ministry, and established an interministerial greening committee with the participation of eight other ministries.

The ECO is giving honourable mention this year to the Ministry of Transportation's (MTO) wildlife mitigation team in its northeastern region office. MTO staff have systematically worked to make reducing vehicle-wildlife collisions a priority. Road mortality has a significant impact on many of Ontario's species. This initiative has generated many worthy accomplishments including the design of a 30m wide wildlife crossing over four lanes of Highway 69; this wildlife crossing would be the largest such structure east of the Rocky Mountains.

1.2 Education

The educational program of the Environmental Commissioner's office is designed to assist Ontarians who require advice about exercising their environmental rights under the *EBR*. Our Public Information Officer responded to over 1,500 direct inquiries this year. Most of these inquiries were responded to immediately while no inquiry took longer than 12 hours to receive an answer. Complementing this service is the ECO's multi-faceted outreach program which includes staff participation in broad-based environmental events and training sessions for staff at the key *EBR* ministries. The ECO plans to directly offer this type of training to the ministries on a semi-annual basis. The Environmental Commissioner also made 50 keynote presentations at conferences and events effectively reaching people all over Ontario.

The ECO's online presence is the final component of the education program. Our website at www.eco.on.ca continues to be the main source of information about the *EBR*. In 2009 we launched a new website at www.ecoissues.ca, where you can browse ECO articles by category, year and keyword; check up on the status of past recommendations; and follow the ECO on Twitter.

As always, we invite you to call us with your questions, comments, and requests for information. Presentations can be arranged for larger groups subject to the availability of ECO staff. Our phone numbers are 416-325-3377 or toll free 1-800-701-6454.



Part 2: Resilience: The Concept



Interesting times

This Annual Report covers the period from April 1st, 2008 to March 31st, 2009, an unprecedented time for Ontario and for the world as a whole. A meltdown of financial markets has led to a global economic downturn that has sharply curtailed consumer spending. Manufacturing sectors have been devastated, and North American car companies, a traditional economic powerhouse for Ontario, have been particularly hard hit. Governments are responding with massive economic stimulus plans, deficit spending and coordinated responses across multiple jurisdictions, recognizing how tightly interconnected many of our systems are.

In past economic crises, political agendas have typically swept environmental concerns aside as “nice to have” but unaffordable frills. This time, though, we see a deeper and wider appreciation of connections between the economy and the environment. A global consensus has formed on the urgency of the climate change peril. While consensus is outstanding on the need to rapidly “decarbonize” the world economy, there is much broader understanding of the scale of changes needed. With the inauguration of a new President in Washington D.C., some key barriers on the climate change file – formerly insurmountable – seem to have melted away. Suddenly there are plans for international carbon cap and trade systems with rigorous rules, and Canada is learning that its status quo approaches to limiting greenhouse gases will not pass muster. Governments – in the U.S., Europe and Ontario – are strongly encouraging green industry and green energy approaches as core elements of their economic stimulus packages.

What hasn't changed?

Our economic and social systems have received multiple shocks this past year, and our ongoing environmental crises have come into sharp new focus. The turmoil of the past year has forced decision-makers of every stripe to re-examine core values and principles. Fiscally conservative governments have found themselves bailing out or even nationalizing financial services and manufacturers; jurisdictions with long laissez-faire traditions are awakening to the need for stronger regulation and reform of finance markets; labour leaders too, are making historic concessions and reopening contracts, in the face of bankruptcy fears for key employers.

“Our economic and social systems have received multiple shocks this past year, and our ongoing environmental crises have come into sharp new focus. The turmoil of the past year has forced decision-makers of every stripe to re-examine core values and principles.”

Times such as these also offer a strong invitation to oversight agencies such as this office to reflect on our own established principles. Here at the ECO, we are beginning that process of reflection, because we recognize that our advice to the Ontario government needs to hold up in all kinds of weather.

Since the inception of this office, the ECO has been guided by values explicitly listed in the opening sections of our defining statute, the *Environmental Bill of Rights, 1993 (EBR)*. From the outset, we have emphasized concepts such as environmental sustainability, acting for the benefit of future as well as present generations, protecting biodiversity and pollution prevention. Other values of the *EBR* are implied in its design; values such as transparency, government accountability, integration of environmental responsibility across a range of ministries, and the public's right to meaningful participation whenever environmental decisions are made.

These themes have given rise to some of our more specific reoccurring arguments. For example, government transparency and accountability are predicated on a strong capacity by government to monitor and report on progress. Similarly, acknowledging responsibility for future generations and the full diversity of life on earth seems to guide one's thinking towards a precautionary approach and attention to cumulative impacts. It also should trigger a profound questioning of key elements of the classic economic model: the assumption of continual, unconfined, compounded growth, the pre-occupation with the short-term, and the neglect of externalities.



Have the defining values of the *EBR* lost any of their currency in these tumultuous times? What additional frameworks or lenses might we apply to strengthen decision-making on the environment? Over the coming months, the ECO looks forward to exploring alternative approaches. There is one concept, however, the ECO considers particularly relevant in this period of rapid transformation, and so has applied to analyses throughout this report: *resilience*.

Resilience Thinking

Resilience thinking is an interpretive tool with wide applications, for natural and social sciences, for policy makers and for business. Resilience has been described succinctly as "the capacity of a system to absorb disturbance; to undergo change and still retain essentially the same function, structure and feedbacks... the capacity to undergo some change without crossing a threshold to a different system regime – a system with a different identity."

Many of the elements of resilience thinking seem fairly intuitive:

- systems, whether natural, social or economic, are linked in innumerable ways
- systems are always changing, and change is not always linear or predictable
- systems naturally experience cycles marked by growth and conservation, followed by releases (often described as crashes) and renewal
- crashes occur when systems are pushed beyond certain thresholds
- systems that have been pushed into a new regime may not recover

We also share fairly intuitive, common sense understandings of resilience and lack thereof. These are captured in familiar idioms and proverbs such as: "don't keep all your eggs in one basket"; "have a back-up plan"; and "you can't unscramble an egg."

What may be less intuitive is the idea that the more efficient a system is, the less resilient it becomes. This observation can apply equally to ecological, economic or social systems. Because a highly efficient system has shed most of its spare capacity and redundancy, it will function very well as long as outside influences remain stable. But such a system is also brittle; if subjected to a major shock, it will be much less able to adjust to the new situation. Modern manufacturing methods, for example, are able to sustain prodigious outputs, supported by complex networks of suppliers and just-in-time delivery systems. But industries relying on these approaches (and lacking just-in-case stockpiles) also become remarkably vulnerable to any disruptions in supply chains, such as traffic congestion, labour strife, or severe weather.

Using resilience as a conceptual framework, the challenge of sustainability might be defined as keeping a given system from crossing a threshold into an undesirable new regime. Alternatively, we may see the need to nudge a system that is stuck in an undesirable regime into a different, more sustainable one; we may want to conceptualize this as "bouncing forward," rather than "bouncing back."

Future shocks

Are the ecological, social and economic systems we rely on sufficiently resilient to absorb a series of major shocks and surprises? Over the coming years, we will have ring-side seats to observe the outcome, because big changes are buffeting all our systems, and more surprises are in store. Climate change is justifiably at the forefront of most policy discussions on environment and sustainability, but other, often connected challenges also loom in the background. For example, an understanding that global oil demand will soon outstrip supply (the Peak Oil challenge) underscores the need to find more sustainable energy sources. Short term prices of fossil fuels may vacillate, but the long term trend will be up – way up. What kinds of transformations of our agricultural, manufacturing, and transportation sectors are possible as a result?

"Global biodiversity is also in crisis, with experts speaking of an ongoing 'mass extinction' of species, of a magnitude previously observed only a handful of times in the planet's fossil record."

Global biodiversity is also in crisis, with experts speaking of an ongoing "mass extinction" of species, of a magnitude previously observed only a handful of times in the planet's fossil record. Ecosystems that have evolved over eons may not swiftly or fully recover from the loss of keystone species. We may instead see fundamental shifts to new regimes, with

different dynamics and different species predominating. What will those regime shifts mean for us, given our own absolute reliance on natural resources and ecosystem services?

Water scarcity, until now predominantly a concern for arid zones like the Middle East and the southwest U.S., will also become much more wide-spread under the twin pressures of climate change and population growth. Industries with high water demands such as agriculture, high tech and beverage sectors are being put on alert to prepare for growing water shortages. Well-resourced industries are strategizing on how to engage with such a future, but others – vulnerable ecosystems and the world's poor – will lack back-up plans.

Applying Resilience Thinking

The report that follows provides ample opportunity to reflect on how Government of Ontario policy decisions affect the resilience of our most important systems.

- We take a critical look at the agricultural concept of "tolerable soil loss"; are we wise to rely on future improvements in agro-technology to maintain crop yields, and can we safely ignore soil erosion rates that can be as high as one tonne of soil per tonne of grain corn produced? Might we come up against some unpleasant surprises? (see Part 4.5 of this Annual Report)
- We probe the impacts of intensified forest harvests for biofuels. (see Part 4.3 of this Annual Report). If

we leave much less forest biomass behind on forest floors to decompose, what will this mean for soil nutrient levels, for diversity of soil micro-organisms and for the health of future forests?

- We question the existing provincial policy that gives priority to sand and gravel extraction even when natural heritage and source waters are at risk (see Part 3.1 and Part 3.3 of this Annual Report). With the aggregate industry focused on its own internal efficiencies, in the absence of constraints to protect other values, locations rich in aggregate will gradually transform into clusters of flooded holes and altered aquifers. Can we really expect these ecosystems to “recover” to a former state, or has their resilience been compromised beyond a recovery threshold?
- We consider the ongoing world-wide decline of amphibian species, and the trouble signs we see for a number of Ontario frogs, toads and salamanders (see Part 4.2 of this Annual Report). Are we observing slow linear declines that can be safely managed by a bit of adjustment of selected threats such as harvesting rates? Or are these species experiencing a whole host of pressures that are sweeping them, at a variety of speeds, past some thresholds of recovery? These thresholds may be observable only in retrospect, and we may also have difficulty observing the pressures, if they operate in slow motion or in unpredictable ways.
- We observe strong population growth in areas of Ontario dependent on long distance pipeline water and sewer connections to Great Lakes. While it may certainly seem efficient to hook large populations to a big pipe solution, such a solution can reduce redundancy, and thus resilience, creating a huge dependency and vulnerability. (See Section 5.3.2 of Supplement; York Region Sewer Application)

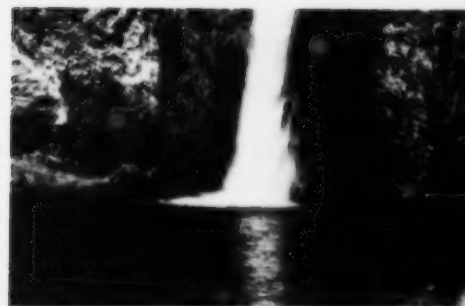
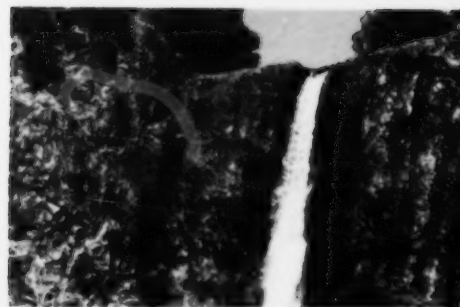
Transformations underway

The Ontario government has clearly recognized that we are moving into a very different future, and is responding to the underlying seismic shifts with a number of far-sighted initiatives. The *Green Energy and Green Economy Act, 2009*, passed in May 2009, promises that thousands of small-scale independent generators will be able to contribute “clean” kilowatts to the central power grid. It will also promote energy conservation measures through reforms of the Building Code and by enhancing the role of local distribution companies in energy demand management. Major new investments in public transit are also underway, especially for the Greater Toronto Area, and should provide alternative forms of mobility with less traffic congestion and air pollution. For northern Ontario, the Premier has committed to permanently protect an interconnected network of conservation lands covering at least 225,000 square kilometres. A major reform of the antiquated *Mining Act* has also been initiated, along with the intent to develop community-based land use plans in the far north.



These are promising, but also challenging directions. There will be huge pressures to revert to “tried and true” approaches, and temptations to assume that our future will look a lot like our recent past. There is a rush, for example, to identify “shovel-ready” infrastructure projects to provide a short-term economic stimulus. We need to stop and ask, however, whether the growth assumptions and energy consumption patterns that applied while these projects were on the drawing boards are now outdated and unsuited to the new reality. Will these projects enable transformations to sustainability, or do we risk spending our children’s legacy on the same old infrastructure that will trap us into the same old unsustainable approaches?

There are also great temptations at times like this, to sweep aside consultation and regulation, in the interests of speed. During times of crisis, decision-making naturally becomes imbued with a special urgency – and too often, with a corrosive haste. Now more than ever, decision-makers at all levels need to insist on time for contemplation, dialogue and healthy debates about our challenges and choices. Over the coming months, the ECO hopes to be included in good discussions with many thoughtful people, listening carefully – looking perhaps not so much for the right answers as the right questions.



Part 3: Building Resilience in Planning



Resilience theory lends itself to many applications in land use planning. Ecological resilience is often defined as the capacity for self-reorganization while maintaining its fundamental structure. This language could provide a definition of successful land use planning: self-reorganization while maintaining a region's fundamental structure. Land use planning regimes often seem to fall down, however, it is hard to define what functions, processes and structures. As outlined in Part 3.4, this criticism has been leveled at Ontario's land use planning regime by numerous *EBR* applicants over the last decade.

Part 3.2 reviews how the province intends to deal with a region of special concern: the Lake Simcoe watershed. Lake Simcoe presents a classic case of a lake that has (almost) been lowered to death, and is an ecosystem that has lost much of its resilience. Excessive phosphorus loadings caused the lake's cold water fisheries to collapse decades ago, and they now are largely dependent on hatchery stocking programs. The ECO outlines MOE's new approaches to protect and restore this watershed. While the ministry is not focusing exclusively on phosphorus controls, and instead plans to tackle a host of threats to the lake's health.

This section also uses urban case studies to illustrate the challenges of varying scales – a concept of particular interest in resilience theory. In one instance (Part 3.6), planners focused at a very local scale on beautifying an important shopping avenue of downtown Toronto. Cycling advocates argued that planners should think on a broader scale as well, and that the local beautification plan should also enhance the capacity of Bloor Street to function as a main cycling artery through the city. In another instance (Part 3.5), odours from a Collingwood ethanol plant caused discomfort for nearby residents. In this case, it seems that while the planning system was able to encourage a laudable goal at a regional scale – urban intensification – it was not able to prevent conflicts at a very local scale, which arose partly because of intensification.

Ontario's new *Green Energy and Green Economy Act, 2009* is very briefly outlined in Part 3.4, and is an example of planning on a truly grand scale. This legislation has the potential to enhance the resilience of Ontario's energy system by reducing our dependence on fossil fuels, by encouraging the proliferation of small, independent energy generators using renewable energy sources, and by creating new incentives and mechanisms for energy conservation.

3.1 Reforming Land Use Planning

Ontario's land use planning system shapes how our communities develop and what activities may take place on the broader landscape. At the core of this system is the *Planning Act*, which is the primary land use planning law that affects municipalities and privately-owned lands. Under the authority of this law, detailed policy directions are set forth in the Provincial Policy Statement (PPS). Its importance, in how it shapes both communities and the natural landscape, cannot be understated.

Under the Ontario government's one-window planning system, the Ministry of Municipal Affairs and Housing (MMAH) is chiefly responsible for the PPS. However, a variety of other ministries, such as the Ministry of Natural Resources (MNR), the Ministry of the Environment (MOE), the Ministry of Transportation (MTO), and the Ministry of Energy and Infrastructure (MEI) play a supporting role. They are also responsible for many of the detailed policies that help to implement the PPS.

Part 3: Building Resilience in Planning



Resilience theory lends itself to many disciplines, and few are better suited to the approach than land use planning. Ecological resilience is often described as the ability of an adaptive system to undergo change and reorganization while maintaining its fundamental functions, processes and structures. The same language could provide a definition of successful land use planning; it should allow for change and reorganization while maintaining a region's fundamental functions, processes and structures. Where land use planning regimes often seem to fall down, however, is in recognizing the importance of ecological functions, processes and structures. As outlined in Part 3.1, this criticism has certainly been levelled at Ontario's land use planning regime by numerous *EBR* applicants over the last decade.

Part 3.2 reviews how the province intends to deal with a region of special concern: the Lake Simcoe watershed. Lake Simcoe presents a classic case of a lake that has (almost) been loved to death, and a lake ecosystem that has lost much of its resilience. Excessive phosphorus loadings caused the lake's cold water fisheries to collapse decades ago, and they now are largely dependent on hatchery stocking programs. The ECO outlines MOE's new approaches to protect and restore this watershed. Wisely, the ministry is not focusing exclusively on phosphorus controls, and instead plans to tackle a host of threats to the lake's health.

This section also uses urban case studies to illustrate the challenges of varying scales – a concept of particular interest in resilience theory. In one instance (Part 3.6), planners focused at a very local scale on beautifying an important shopping avenue of downtown Toronto. Cycling advocates argued that planners should think on a broader scale as well, and that the local beautification plan should also enhance the capacity of Bloor Street to function as a main cycling artery through the city. In another instance (Part 3.5), odours from a Collingwood ethanol plant caused discomfort for nearby residents. In this case, it seems that while the planning system was able to encourage a laudable goal at a regional scale – urban intensification – it was not able to prevent conflicts at a very local scale, which arose partly because of intensification.

Ontario's new *Green Energy and Green Economy Act, 2009* is very briefly outlined in Part 3.4, and is an example of planning on a truly grand scale. This legislation has the potential to enhance the resilience of Ontario's energy system by reducing our dependence on fossil fuels, by encouraging the proliferation of small, independent energy generators using renewable energy sources, and by creating new incentives and mechanisms for energy conservation.

3.1 Reforming Land Use Planning

Ontario's land use planning system shapes how our communities develop and what activities may take place on the broader landscape. At the core of this system is the *Planning Act*, which is the primary land use planning law that affects municipalities and privately-owned lands. Under the authority of this law, detailed policy directions are set forth in the Provincial Policy Statement (PPS). Its importance, in how it shapes both communities and the natural landscape, cannot be understated.

Under the Ontario government's one-window planning system, the Ministry of Municipal Affairs and Housing (MMAH) is chiefly responsible for the PPS. However, a variety of other ministries, such as the Ministry of Natural Resources (MNR), the Ministry of the Environment (MOE), the Ministry of Transportation (MTO), and the Ministry of Energy and Infrastructure (MEI) play a supporting role. They are also responsible for many of the detailed policies that help to implement the PPS.

The PPS provides broad direction on how land use planning should occur and outlines matters of provincial interest. It provides direction for land use patterns, forms of development, the management of some natural resources, and other issues, such as natural hazards. From an environmental perspective, the PPS is very important; it contains planning direction for woodlands, wetlands, wildlife habitat, air quality, and the quality and quantity of water. The PPS also plays a role in governing such land uses as aggregate extraction, agriculture, transportation, and other types of infrastructure. The *Planning Act* stipulates that decisions made by planning authorities, such as the directions set out in official plans, "shall be consistent with" the PPS. Municipal official plans must be updated every five years.

The current PPS came into effect on March 1, 2005. The *Planning Act* requires that the Minister of Municipal Affairs and Housing begin a review of the PPS every five years. The next scheduled public review of this land use policy will begin in March 2010. In the years that follow, the next major milestone for potential changes to Ontario's land use planning system will occur in 2015 when the Oak Ridges Moraine Conservation Plan, the Niagara Escarpment Plan, and the Greenbelt Plan are reviewed; each of those plans are governed by separate laws.

Is Ontario's Planning System Responsive to Change?

A fundamental public right exists under the *Environmental Bill of Rights, 1993 (EBR)* that allows Ontarians to request that a prescribed ministry amend its policies, regulations, or legislation in order to better protect the environment. Applications for review are an important legal tool for the public to express their concerns about how the government is addressing its responsibilities. However, under the *EBR*, a ministry may legitimately refuse to undertake such a review on several grounds, including, for example, if the policy in question was approved, amended, or reviewed within the last five years.

Over the last decade, 28 applications for review have been submitted by the public that directly or indirectly requested changes to the PPS. In every case, MMAH denied these requests, either because the PPS had already been reviewed within the last five years or it was in the process of being reviewed. In fact, MMAH has denied every single *EBR* application that it has ever received on any subject matter. Despite the nature of their mandates and their obvious role in land use planning issues, other ministries often deny these *EBR* applications by asserting that they are not directly responsible for the PPS. This handling of the concerns raised by Ontarians does not constitute good public policy.

Handling of Applications for Review Under the *Environmental Bill of Rights, 1993* That Requested Changes Related to the Provincial Policy Statement

	Applications Submitted	Denied	Undertaken
Ministry of Municipal Affairs and Housing (MMAH)	16	16	0
Ministry of Natural Resources (MNR)	7	7	0
Ministry of the Environment (MOE)	5	2	3

These *EBR* applications have raised a wide variety of concerns about Ontario's land use planning system. Many of these applications centre on the need to improve the requirements for environmental protection. Other applications expressed concerns that government policy changes are necessary to more broadly apply sustainable planning direction to issues such as infrastructure and transportation. These concerns

also are reflected in the large number of telephone calls, letters, and e-mails that the ECO receives on these issues from the public.

In this Annual Report, the ECO highlights some of the concerns that have been raised by the public over the last decade in applications for review under the *EBR*. In each case, MMAH denied the review. The ECO hopes that these types of concerns about Ontario's land use planning system are carefully weighed in the next review of the PPS that begins in March 2010.

Water Quality and Quantity: Moraines

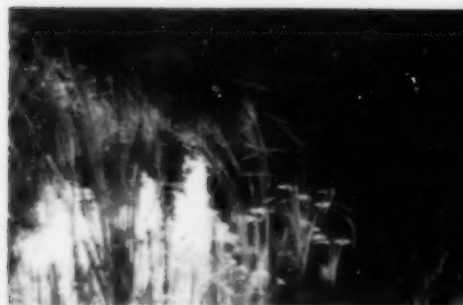
Over the last decade, the ECO has received numerous *EBR* applications requesting enhanced protection for moraines in southern Ontario from development pressures. Most of these applications dealt specifically with the need to protect the moraines' ecological and hydrogeological features, such as their role in maintaining landscape connectivity or their functions as groundwater and recharge areas.

In March 2000, members of the public submitted an *EBR* application requesting the long-term protection for the Oak Ridges Moraine. The applicants were concerned that "existing land-use planning laws and policies are inadequate to safeguard the ecological integrity" of this important geographic feature. In response, MMAH denied this request, stating that "the guidelines, policy and legislation comprising the current land use planning system in Ontario provides that protection." In our 2000/2001 Annual Report, the ECO concluded that the ministry's reasons for denying the applications were inappropriate as compelling evidence was presented that existing land use policies were not adequately protecting the moraine, new scientific and technical information was available, and that development pressure was harming the environment. In that report, the ECO recommended that,

MMAH, in consultation with other ministries and the public, develop a comprehensive long-term protection strategy for the Oak Ridges Moraine.

Ironically, within a year of MMAH denying the *EBR* applications, the *Oak Ridges Moraine Protection Act, 2001* was passed, establishing a six-month development moratorium on the moraine. The government then passed the *Oak Ridges Moraine Conservation Act, 2001* and finalized the *Oak Ridges Moraine Conservation Plan* in April 2002. The plan provides land use and resource management planning direction on how to protect the ecological and hydrological features of the moraine, beyond the general directions found in the PPS.

In 2006 and 2007, a new series of *EBR* applications requested new policy or legislation to protect both the Waterloo and the Paris Galt Moraines. Similar to the Oak Ridges Moraine case, the applicants raised concerns about the damaging impact of development on groundwater and drinking water. Additionally, the applicants stated that the protection of the Paris Galt Moraine groundwater recharge areas is critical as "growth areas will shortly encroach into the moraine" because of the direction of the *Places to Grow Act, 2005* which effectively supersedes the PPS.



MMAH denied these *EBR* applications, stating that the PPS and the *Greenbelt Act, 2005* (which only applies to a small portion of one of the moraines) provide for sufficient protection of both natural heritage features and water resources. Moreover, the ministry also denied these requests on the basis that the PPS had been reviewed within the last five years. In stark contrast, MOE agreed to undertake a review based on the applicants' concerns, but said neither the *Clean Water Act, 2006* nor the PPS would be included in the review. The ECO commends MOE for taking the applicants' concerns seriously. In May 2009, MOE completed their review of these *EBR* applications; the ECO will report on them in a future annual report.

Natural Heritage

The ECO has received many *EBR* applications requesting the enhanced protection of natural heritage features. Two applications raised concerns about how natural heritage features, such as fish habitat are considered in the government's one-window planning system, noting that MMAH allows small structures to be built close to water's edge contrary to MNR's recommended set-backs. The applications were denied by MMAH and MNR.



Other *EBR* applications called for the review of the PPS and how it addresses wetlands. Although the PPS restricts development and site alteration in wetlands evaluated by MNR as "significant," the applicants stated that these policies are essentially meaningless as development is being approved in wetlands that have not yet been evaluated by MNR. Additionally, the applicants provided evidence that less than one per cent of wetlands in Haliburton Country had been evaluated for their significance under the PPS. Although MMAH and MNR both denied this *EBR* application, the ECO found that there was compelling evidence that the environment was being harmed.

These *EBR* applications highlight the fact that the PPS allows development and site alteration in wetlands not evaluated as "significant." In essence, there are two main hurdles impeding the protection of wetlands. Wetlands must first be evaluated and determined by MNR to be significant. The municipality must then designate the wetland as provincially significant in its official plan for any actual protections from development to take effect. The ECO previously observed,

Decision-makers, such as municipalities, the Ontario Municipal Board, conservation authorities and other ministries are unlikely – and to some extent unable – to use tools that they have to protect wetlands unless MNR has carried out an evaluation and identification. In other situations, municipalities have been reluctant to designate wetlands in their official plans even after they have been identified by the province, therefore, the current system is not resulting in the level of protection for wetlands to which the government has committed.

The City of Ottawa provides an example of wetland protection hurdles in the current land use planning system. In response to a development application in 2004, a contracted wetland evaluator identified the Goulbourn Wetland Complex on the edge of the city as provincially significant, as later confirmed by MNR in 2005. Landowners objected to the wetland status because of MNR's evaluation process, asserting that the wetlands formed because of poorly maintained drains and that the designation would lower property values. In response to a landowner petition, the city declared a creek in the Goulbourn Wetlands as a

municipal drain under the *Drainage Act* and agreed in 2006 to drain the land to “pre-existing conditions.” MNR recently evaluated wetlands in the City of Ottawa and identified 3,600 hectares of new provincially significant wetlands and re-confirmed the status of the Goulbourn Wetlands. MNR then requested the city appropriately designate these lands within their official plan. In January 2008, the city tabled amendments to its official plan, including the designation of the newly identified significant wetlands with a few exceptions, such as the Goulbourn Wetlands. The City of Ottawa proposes to create a special policy for these wetlands, maintaining their current status unless an application for land use change is received, at which time the area will be subject to the city’s wetland policies. In other words, development would not be allowed in the wetlands but site alteration would be. The wetlands in question will be re-evaluated five years after the drainage improvements are completed – essentially when the wetlands are drained of their provincially significant status.

Aggregate Resources

Conflicts between mineral aggregate extraction and other land uses have come to the attention of the ECO through *EBR* applications, as well as less formal avenues, such as letters and telephone calls. These issues include:

- the conflict in the PPS between protecting both mineral aggregate and natural heritage features for long-term use;
- the objective of making aggregates available as close to markets as possible;
- the need for a new mechanism to evaluate applications for aggregate operations and to screen them out if necessary; and
- the need for a provincial aggregate conservation policy.

As an example, members of the public submitted an *EBR* application that raised concerns about a proposed quarry: the site had significant natural heritage features, the proposed operation was incompatible with local land uses set out in the municipal official plan, and it was in close proximity to the recharge area for local municipal wellheads. The applicants were also concerned with the seemingly pre-determined outcome of aggregate applications (i.e., few are refused) and suggested the government should adopt a pre-screening process for sites to determine any land use conflicts (such as with natural features) upfront. MMAH and MNR denied this *EBR* application.

The ECO disagreed with these *EBR* applications being denied, and identified several key problems that exist with aggregate licensing and extraction in Ontario. The ECO’s concerns included: the process essentially involves a pre-determined outcome; natural features are often destroyed; and the public faces serious hurdles in being able to meaningfully participate in the decision-making process. In our 2006/2007 Annual Report, the ECO recommended,

the provincial government reconcile its conflicting priorities between aggregate extraction and environmental protection. Specifically, the province should develop a new mechanism within the *ARA* approvals process that screens out, at an early stage, proposals conflicting with identified natural heritage or source water protection values.

ECO Comment

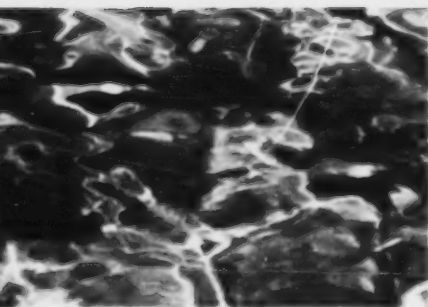
Insufficient weight is given to environmental planning and protection in Ontario's land use planning system. This has been a long-standing concern of the ECO in numerous Annual Reports to the Ontario Legislature. Nevertheless, the need to address the degradation of the environment is, perhaps, more urgent than ever.

Such laws as the *Oak Ridges Moraine Conservation Act, 2001*, the *Greenbelt Act, 2005*, and the *Lake Simcoe Protection Act, 2008* reflect a disturbing trend to protect notable natural heritage features on an individual basis rather than implement broader-based safeguards under the PPS. This tendency to protect by exception on a regionally specific basis rather than as a rule is both reactionary and problematic. In our 2007/2008 Annual Report, the ECO stated,

Natural features of the landscape – such as large moraines with significant hydrologic functions – should be used as the starting point to guide local land use planning decisions. The current land use planning system gives insufficient weight to environmental concerns, and it does not adequately empower planning authorities to restrict specific forms of development where they are ecologically inappropriate.

These broader problems become readily apparent at a local scale. The ECO believes that the PPS provides insufficient measures to prevent the continued degradation and loss of natural features, such as wetlands, woodlands, and the habitat of native species. Further, the supporting policies that guide natural heritage protection, such as the Natural Heritage Reference Manual and the Ontario Wetland Evaluation System, are dated. Both these documents pre-date the 2005 PPS and do not necessarily reflect current environmental realities.

The protection of wetlands hinges on whether MNR first evaluates them as being provincially significant; then they must overcome a second hurdle and be designated in municipal official plans. However, MNR's effort to evaluate wetlands has been inconsistent across the province, from the evaluation of less than one per cent of the wetlands in Haliburton County to only some 40 per cent in the City of Ottawa. The province-wide effectiveness of the PPS cannot be judged as MMAH does not track the extent of wetland designation in municipal official plans.



If such deficiencies exist for the protection of wetlands, the problem is much worse for significant woodlands. Approximately 80 per cent of southern Ontario's original woodland cover has been lost. The PPS provides an open-ended definition of significant woodlands, and lacks an explicit requirement to protect significant woodlands, essentially leaving it up to municipalities to develop their own criteria beyond the general direction that is provided. Unlike its screening of wetlands, MNR has no formal role in evaluating or identifying significant woodlands. The result is

that, typically, only larger municipalities with ample planning staffs devote more than a passing mention to addressing significant woodlands in their official plans. Moreover, MMAH does not track the actual number of significant woodlands designated in municipal official plans. MMAH interprets its role as only checking to see if official plans give mention to significant woodlands, not whether any are actually protected. The ECO does not believe the PPS provides sufficient safeguards to protect the province's significant woodlands.

Recommendation 1: The ECO recommends that MMAH's 2010 review of the PPS introduce effective mechanisms for protecting significant woodlands, including mechanisms for woodland evaluation, designation, tracking and reporting.

A similar problem arises with respect to efforts to evaluate the effectiveness of the PPS's measures for protecting significant wildlife habitat, as well as the significant habitat of threatened and endangered species. MMAH does not track the area of lands that are set aside as significant wildlife habitat. Protection for significant wildlife habitat is dealt with on a development-specific basis, functioning on an almost entirely reactionary basis. As such, the PPS provides negligible comprehensive protection for species at risk. Given that MMAH casts the PPS as a key mechanism to address the loss of Ontario's biodiversity, these facts are not at all reassuring.

Ten years ago, the ECO recommended that MMAH monitor whether the PPS is having the desired effects, report this information to the public, and – if these policies are not effective – reconsider the provincial role in planning. In April 2009, MMAH finally released a draft set of indicators to assess the performance and effectiveness of the PPS. To a large extent, these draft indicators only determine how "consistent" official plans are with the PPS, rather than assess whether provincial direction is achieving an actual on-the-ground effect in conserving natural heritage. The ECO will review these indicators in a future annual report.

MMAH states that there is "no implied priority" in the issues that the PPS addresses. However, it quickly becomes evident to observers of Ontario's planning system that there are indeed priorities, and they do not favour stemming the tide of extractive and destructive land uses. This short-sighted approach undermines the resilience of the natural environment that communities value and depend on. Measures to conserve and protect significant ecological features and functions must become an implicit and fundamental part of the planning system. Failing to shift the broader planning direction to a more enlightened approach will have long-term ecological repercussions. The choices that are made now will be glaringly apparent for the generations to come and those generations will have to bear the burden of the poor decisions that are made today.

Planning's Uneven Playing Field: the Asymmetry of Power and Resources as a Barrier to the Public Interest and Participation

Every year, the ECO receives many inquiries from Ontario residents and neighbourhood groups who are concerned about development proposals in their communities. Unfortunately, these concerned residents and ratepayer organizations often lack the resources and specialized knowledge necessary to navigate the complex planning approval process. The system is hugely weighted in favour of those in the development industry, who have the resources, knowledge and experience (and access to a stable of planning, environmental and other professionals with specialized expertise) to skillfully argue their case before the Ontario Municipal Board (OMB).

Nowhere is the asymmetry of the system more evident than in the relative economic power of the two sides involved. When the stakes are in the many millions – sometimes billions – of dollars, the resources that developers are prepared to invest to overcome residents' objections far surpass the capacity of most citizens groups, environmental organizations, and even conservation authorities and municipalities. Adding to the wide asymmetry inherent in the system is the threat of "SLAPP suits" – Strategic Lawsuits Against Public Participation – described as "civil actions with little or no substantial basis or merit advanced

with the intent of stifling participation in public policy and decision-making.” In the planning context, SLAPP suits are advanced by developers to discourage local residents from participating in the planning approval process, to divert citizens groups’ financial and/or other resources from public participation, or to punish residents for participating. SLAPP suits, whether successful or not, affect far more than the specific individuals or groups that are targeted as defendants; such lawsuits can deter others from participating in the same or other matters of public concern, out of fear of the financial liability that could ensue.

The Big Bay Point Decision

In Ontario, a recent case before the OMB shone a spotlight on this issue. A group of concerned residents and others participated in an OMB hearing regarding approvals for Big Bay Point Resort, a proposed \$1 billion luxury resort project on the shores of Lake Simcoe. The developer, Kimvar, who was successful at a 2007 hearing in obtaining the required approvals to proceed despite opposition from the residents’ group, subsequently sought a costs award of \$3.2 million dollars against the group of opponents and their lawyers. Kimvar argued that the opponents had delayed the hearing process and engaged in unreasonable, frivolous and vexatious conduct in bad faith and without regard to cost. The opponents argued that the motivation behind Kimvar’s claim for costs was to silence public opposition to the project, which constitutes an improper purpose, and that making the requested award for costs would have the effect of a SLAPP suit. The Environmental Commissioner was called as a witness for intervenors who sought to argue that a large cost award would discourage public involvement in future OMB hearings.

In its January 2009 decision on the costs motion, the OMB disagreed that the developer’s claim for costs was brought for an improper purpose, but adopted the opponents’ position that the public interest should be considered and that in this case “an award of costs anywhere near the amount requested would create a chilling effect.” Accordingly, the OMB denied the developer’s claim for costs. Despite this positive outcome for the opponents, the costs incurred just to defend the developer’s claim have reportedly exceeded the maximum amount the OMB has ever awarded in costs.

The Need for Equal Footing

The Big Bay Point decision and similar cases have led to calls for the Ontario government to develop anti-SLAPP legislation, a move that several US States, British Columbia and Québec have already made. On December 9, 2008, a private member’s bill, *Protection of Public Participation Act, 2008*, received First Reading in the Ontario Legislature. However, Bill 138 died on the Order Paper when the Legislature adjourned in June 2009.

The public’s right to participate in decision-making over matters of public interest is a cornerstone of our democratic system. Efforts aimed at suppressing this right should be discouraged by the Ontario Legislature and other public agencies. The ECO sees a need for provincial legislation that would put both sides of development disputes on equal footing. Such legislation could serve to halt SLAPP suits in their tracks. It also could provide a means for the public to access financial and other resources in order to exercise their participatory rights in planning approvals and other contexts that have a significant bearing on the environment.

Recommendation 2: The ECO recommends that MMAH take the lead in developing legislation to discourage developers from using cost applications and similar tactics to frustrate public participation in the planning approval process.

For ministry comments, please see page 161.

3.2 Lake Simcoe: The Province Steps In

Description

Aside from the Great Lakes, Lake Simcoe is southern Ontario's largest inland lake. Since European colonization began in the early 19th century, the Lake Simcoe watershed has experienced a decline in water quality. Increases in phosphorus and decreases in dissolved oxygen led to the collapse of Lake Simcoe's cold water fisheries from the 1960s through the 1980s. The Lake Simcoe Environment Management Strategy (LSEMS), a multi-stakeholder environmental initiative, was launched in 1990 with the aim of reducing phosphorus loadings into the watershed. Despite the success of this initiative, it was determined that long-term efforts are needed to protect and restore the watershed, especially in light of ongoing development pressures, population growth and the effects of climate change.

In March 2008, the Ministry of the Environment (MOE) began consultations on a discussion paper, *Protecting Lake Simcoe: Creating Ontario's Strategy for Action*. MOE's strategy to protect Lake Simcoe included the creation of legislation and a watershed protection plan. The ministry also created two advisory committees to aid in the development of the strategy: a Science Advisory Committee and a Stakeholder Advisory Committee. Proposed legislation to support the strategy was posted to the Environmental Registry for public comment in June 2008.

On December 2, 2008, the Ontario government passed the *Lake Simcoe Protection Act, 2008 (LSPA)*. The purpose of the Act is to "protect and restore the ecological health of the Lake Simcoe watershed." The Act requires the creation of the Lake Simcoe Protection Plan (the "Plan") and the establishment of two Minister's advisory committees: the Lake Simcoe Science Committee and the Lake Simcoe Coordinating Committee.

The Minister of the Environment must prepare an annual report that describes the measures taken to implement the Plan and summarizes the advice received from the two advisory committees. In addition, the Act requires the Minister to prepare a five-year report, detailing monitoring program results and how the objectives of the Plan are being achieved. The Act specifies that both the annual and five-year reports will be posted on the Environmental Registry.

The *LSPA* allows MOE to create regulations for activities that may adversely affect the ecological health of the watershed. For example, a shoreline protection regulation could regulate or prohibit activities in or around the shoreline, tributaries and wetlands of the watershed, and establish new shoreline permits to govern activities that may adversely affect the ecological health of the Lake Simcoe watershed. Additional



regulations could be created to require municipalities to pass tree cutting or site alteration by-laws under the *Municipal Act, 2001* and for transitional matters related to the implementation of the Plan.

To curb phosphorus or other nutrient inputs into the lake, the Act enables the government to make a regulation to establish a water quality trading system by amending the *Ontario Water Resources Act* (OWRA). Water quality trading is a mechanism for achieving water quality targets or objectives whereby dischargers can offset their pollution emissions by purchasing pollutant reduction credits generated by others within the watershed. However, the Minister of the Environment must prepare and place on the Environmental Registry a water quality trading feasibility report, followed by a response statement before such a regulation can be made.

Lake Simcoe Protection Plan

On June 2, 2009, MOE released the final Lake Simcoe Protection Plan, established under the *Lake Simcoe Protection Act, 2008*. The Plan consists of targets, indicators, and policies organized into categories, including: aquatic life, water quality, water quantity, shorelines and natural heritage, other threats and activities (e.g., invasive species, climate change and recreational activities), and implementation. The policies in the plan are grouped into four categories:

- Designated - *Planning Act, Condominium Act, 1998* and prescribed instrument decisions must conform with these policies;
- Have regard to - *Planning Act, Condominium Act*, and prescribed instrument decisions must have regard to these policies;
- Monitoring - policies commit public bodies such as ministries, municipalities, and conservation authorities to implement monitoring programs; and
- Strategic action - are legally non-binding and include policies related to research, stewardship, education and outreach and best management practices.

The Plan includes a commitment to water quality targets, such as a long-term reduction of phosphorus loading to 44 tonnes per year to achieve dissolved oxygen levels of 7 mg/L in the lake. However, the Plan lacks any targets for water quantity, such as targets for water conservation or efficiency. The Plan does include a non-binding strategic action policy that commits specific municipalities to establish targets as part of their water conservation or efficiency plans within the next five years. The absence of any clear watershed level targets for water quantity may render the efforts largely ineffective.

The ECO will review this decision in our 2009/2010 Annual Report and will continue to monitor the implementation of the Plan.

A Watershed in Trouble

Located about an hour north of Toronto, the Lake Simcoe watershed is home to approximately 350,000 permanent residents and an additional 50,000 seasonal residents. The watershed crosses 23 municipal boundaries, including those that make up York and Durham Regions. It also contains a portion of the Oak Ridges Moraine, regulated under the *Oak Ridges Moraine Conservation Act, 2001*, and the provincially designated Greenbelt, regulated under the *Greenbelt Act, 2005*.

Over the last few decades, extensive development pressure has been evident in the watershed. Communities grew rapidly with a population expansion of 30 per cent from 1991 to 2001. The population within the watershed is anticipated to further increase as a direct result of the Growth Plan for the Greater Golden Horseshoe under the *Places to Grow Act, 2005*. For example, the County of Simcoe, City of Barrie and City of Orillia must plan to accommodate an additional 275,000 residents by 2031, a 70 per cent increase compared to the 2001 population level of 392,000.

Development and intensive agricultural activities have caused extensive soil erosion and a staggering increase in phosphorus loading. Some scientists estimated that the annual phosphorus loading in Lake Simcoe increased threefold compared to pre-settlement rates. Anthropogenic sources of phosphorus flowing into Lake Simcoe come from sewage treatment plant discharges, erosion and runoff from agriculture lands, septic systems, storm-water run off from urban areas, and atmospheric deposition from the combustion of fossil fuels and forest fires.

Excessive phosphorus is considered the main threat to water quality in the Lake Simcoe watershed. An increase in phosphorus leads to an increase in aquatic plant and algae biomass, which contributes to the depletion of dissolved oxygen in the bottom layer (hypolimnion) of the lake and degradation of the critical habitat of coldwater species. Studies found that as hypolimnetic water quality declined in Lake Simcoe, recruitment failure of lake trout (*Salvelinus namaycush*), lake whitefish (*Coregonus clupeaformis*), and lake herring (*Coregonus artedii*) occurred during the 1960s, 1970s, and 1980s, respectively. Currently, the lake trout and lake whitefish populations are maintained or supplemented through hatchery stocking programs.



The Lake Simcoe Science Advisory Committee identified additional stressors that affect the Lake Simcoe ecosystem. These stressors include invasive species, pollutants (including pharmaceuticals and other organics, metals and contaminated sediments), bacteria and other pathogens, climate change, water extraction, and other human pressures, such as fishing, fish stocking, and boating.

MOE is taking an innovative approach in addressing phosphorus control by setting the stage for the development of a water quality trading strategy. On March 26, 2008, MOE filed Ontario Regulation 60/08 (Lake Simcoe Protection) under the *OWRA* to set interim limits on phosphorus loading into Lake Simcoe. The ECO reviewed this regulation in the Supplement to our 2007/2008 Annual Report (pages 137-141). In March 2009, MOE posted an exception notice on the Environmental Registry to extend the regulation for an additional year (Environmental Registry Number 010-6308) to allow for the development of a phosphorus reduction strategy (for more information please see Part 7.4 of this Annual Report).

Public Participation & EBR Process

On March 27, 2008, MOE posted a proposal notice on the Registry to invite public input on the proposed strategy to protect Lake Simcoe for a 36-day comment period. On June 17, 2008, MOE posted a proposal notice on the Registry to invite public input on Bill 99, the *Lake Simcoe Protection Act, 2008*. MOE provided a 60-day public review and comment period on the Registry. On January 13, 2009, the draft Lake Simcoe Protection Plan was posted on the Registry for a 62-day public review and comment period.

On June 18, 2009, MOE posted three decision notices: the first for the Lake Simcoe protection strategy; the second for the *LSPA*, which was passed and received Royal Assent December 10, 2008; and a third establishing the Lake Simcoe Protection Plan pursuant to section 3 of the Act. The Plan and sections 7 and 8 of the *LSPA* came into effect June 2, 2009.

During the comment periods for the strategy and *LSPA*, MOE held three community partner workshops and several focused stakeholder meetings (i.e., with the agriculture sector, Town of Georgina, Simcoe Chapter of Building Industry and Land Development, and the Lake Simcoe Region Conservation Authority). MOE began an Aboriginal Engagement Strategy in December 2007 that focused on early engagement and outreach activities to support the draft legislation. In addition, the ministry created two advisory committees, a Science Advisory Committee and a Stakeholder Advisory Committee.

MOE did an adequate job on public consultation for this strategy and legislation through the use of the Environmental Registry, public consultation sessions and workshops. The ECO commends MOE for establishing a Minister's Science Advisory Committee and a Stakeholder Advisory Committee in the development of the strategy, legislation and Plan.

ECO Comment



The ECO commends MOE for undertaking a strategy, enacting legislation, and developing its Plan to provide increased protection to the Lake Simcoe watershed. The ECO acknowledges past efforts taken under the LSEMS to reduce phosphorus concentrations in the lake and re-establish some naturally reproducing cold water fisheries (such as lake trout). However, concern for Lake Simcoe's watershed remains; uncertainty still surrounds the lake's response to ongoing and future environmental stressors in the watershed, such as increased development and population growth, land use changes, climate change, and new invasive species.

The ECO supports MOE's use of a landscape-level approach based on watershed planning in its strategy to protect and enhance Lake Simcoe. The ECO is especially encouraged that MOE has legislated a watershed management plan in Ontario's land use planning system to address environmental concerns.

Over the past decade, the Ontario government has enacted site or landscape-specific legislation to enhance environmental protection, such as the *Greenbelt Act, 2005*, the *Oak Ridges Moraine Protection Act, 2001* and now the *LSPA*. Although the ECO is generally supportive of these environmental statutes, this trend in landscape-specific law, policies and land use plans clearly point to inadequate protection for ecosystem features and functions in southern Ontario's overall land use planning system (i.e., guided by the *Planning Act* and the Provincial Policy Statement). While MOE's approach to address environmental issues in Lake Simcoe is commendable, the ECO questions the use of this model for other watersheds in the province. The ECO wonders if resources used to develop the Lake Simcoe strategy would have been better allocated to examine and enhance current legislation, policies and activities to protect and restore the ecological health of all watersheds in Ontario.

Although the ECO is pleased that the overall goal of the *LSPA* does not focus exclusively on phosphorus loading, the ECO encourages MOE to maintain long-term phosphorus loading targets to reduce and limit further phosphorus inputs. Since Lake Simcoe has received excessive amounts of phosphorus that has accumulated in sediments over so many decades, its resilience to future land use changes and stresses such as climate change and invasive species may have been severely compromised. Hence, the success of the *LSPA*, the Plan, and the phosphorus reduction strategy is of paramount importance. The ECO will continue to monitor and review MOE's progress and implementation of the Lake Simcoe Protection Plan.

For a more detailed review of this decision, see Section 4.5 of the Supplement to this Annual Report.

For ministry comments, please see page 112.

3.3 The Swiss Cheese Syndrome: Pits and Quarries Come in Clusters

Too often, a simplistic, short-term approach is taken to land use planning. While the management of our land and its resources should reflect the immediate needs of a community, it must also anticipate the future aspirations of generations to come. In order to balance long-term social, economic and environmental interests, progressive land use planning must be underpinned by the constraints of natural environmental limits.

Progressive land use planning should begin at the landscape level. The significant natural functions of the environment – watersheds, moraines, large natural areas – should act as the critical first screen for later site-specific land use decisions. By initially establishing natural limits upfront, greater certainty is then achieved when localized decisions need to be made. Knowing upfront where different forms of development are appropriate or not, based on natural limits, is a sound approach to planning.

A resilient land use planning system should accommodate the unexpected. It should promote making decisions based on the best available information; it should not sacrifice the long-term sustainability of the land for perceived short-term benefits. It also should contextualize decision-making, serving as a check to ensure that broader objectives and constraints are reflected within individual decisions. It has been observed that this type of approach to planning is nothing more than common sense, although common sense is not always common in practice.

Arriving at the best possible decision in land use planning necessitates looking at the sum total of possible impacts. What is the total effect that this choice will have? What impacts will other choices have? How will this choice affect both short-term and long-term planning objectives for this area? Such questions are addressed when considering the cumulative effects of a land use planning decision. Cumulative effects can be understood as "changes to the environment that are caused by an action in combination with other past, present and future human actions."

One of the more contentious land use planning issues in Ontario is deciding where aggregate operations – pits and quarries that extract sand, gravel, and stone – may be located and under what conditions. Government land use planning policies, as reflected in the Provincial Policy Statement, 2005 (PPS), give a high priority to aggregate operations. This priority is further re-enforced in the specific rules for aggregate

operations that are found in the *Aggregate Resources Act (ARA)*. The decision to place a high priority on this land use is often viewed as coming at the expense of other land uses.

In April 2008, an *EBR* application was filed by members of the public that raised concerns that cumulative effects are not addressed in the approval of new aggregate operations. The applicants requested a review of the *ARA*, as they were concerned that there is no mandatory requirement for the consideration of cumulative social and environmental impacts when the Ministry of Natural Resources (MNR) is considering approvals for pits and quarries. The applicants asserted that the regional impact of existing pits and quarries should be assessed when MNR is considering the approval of any new operations.

MNR denied this *EBR* application and stated that the *ARA* "is not the appropriate process to consider cumulative impacts." The ministry took the position that there are already mechanisms to consider cumulative impacts in the local municipal official planning process, which must be consistent with the PPS. MNR stated that "any cumulative assessment mechanism needs to be sufficiently broad to consider all land uses (not limited to aggregate extraction operations)." The ministry used the example of a new residential subdivision and stated:

Some may view these impacts positively, as a consequence of expanding growth of the community, while others may view these impacts negatively, as a change to the rural character of the community. It becomes a basic societal question, which is more appropriately addressed from a broad land use planning.

In essence, MNR took the position that thinking about cumulative effects was not its responsibility. However, the ministry did state that "cumulative impacts may be considered" in assessing the hydrogeological effects of new aggregate operations it licenses under the *ARA*.

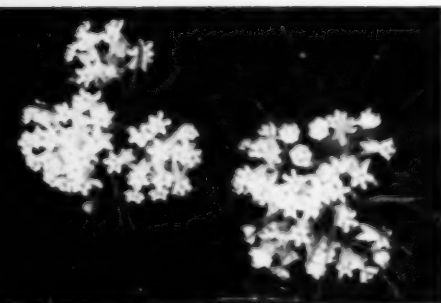
ECO Comment

The ECO disagrees with MNR's position that the cumulative effects of proposed aggregate operations are adequately considered in the municipal land use planning and provincial licensing processes. The ministry's rationale was largely based on the assumption that cumulative effects are appropriately and effectively assessed through the municipal official planning process, guided by the *Planning Act* and the PPS.

The PPS provides general policy direction on matters of provincial interest, reflecting the Ontario government's stated priorities for the establishment of such land uses as aggregate operations. However, it does not contain any reference to cumulative effects or their consideration in municipal decision-making.

Moreover, municipal decisions on the zoning of lands typically do not assess cumulative impacts beyond a general level. Making broad societal choices should not be confused with site-specific technical assessments.

MNR should develop a regionally-based planning approach, involving the assessment of cumulative effects, when considering an individual approval for a new or expanded aggregate operation. Such an approach is logical as geologic formations naturally cluster favourable locations for pits and quarries. This same clustering effect also is driven by a provincial land use planning directive which explicitly encourages that aggregate be



made available close to markets. As a result, land use conflicts are almost assured: some of the highest quality aggregate deposits are found in the areas of the greatest ecological and social significance in southern Ontario.

The ECO has previously commented that Ontario's current land use planning system is weighted in favour of extractive and destructive uses of the land. It often is deterministic in nature and does not include an *a priori* discussion of the need for any given project. This approach undermines the resilience of the lands, waters, and other aspects of the natural environment that communities value and upon which they depend.

Municipalities have little practical authority to restrict the approval of new pits and quarries under the existing land use planning system. They also are often reluctant to restrict new operations because of the costly possibility of facing an Ontario Municipal Board hearing. This skewed process often results in frustrated local residents feeling disenfranchised by both their local politicians and the provincial government.

The broader land use planning process under the *Planning Act* should, conceptually, consider cumulative effects as part of its decision-making process. However, MNR has an obligation to ensure that its own regulatory framework – the approvals over which it has direct authority – explicitly considers the combined effects of various land uses. MNR's approval processes are intended to be the fine filters for site-specific land use decisions, and they often are the appropriate mechanism for the consideration of detailed technical information. Broader societal choices about land uses, as laid out in a municipal official plan's system of zoning, should not be construed as a thorough assessment of the ecological and hydrogeological cumulative impacts of a particular project.



Historically, MNR has not considered its Statement of Environmental Values (SEV) in making decisions about instruments, such as permits issued under the *ARA*, that are prescribed under the *EBR*. Section 11 of the *EBR* requires each prescribed ministry to consider its SEV when making an environmentally significant decision; it contains no exemption for decisions on instruments. Beginning with our first Annual Report in 1996, the ECO has held the position that SEVs must be considered by prescribed ministries when they make environmentally significant decisions on instruments.

Recommendation 3: The ECO recommends that MNR's existing commitment to consider its SEV and cumulative effects during instrument decisions should also apply to instruments issued under the *Aggregate Resources Act*.

The Ontario Divisional Court ruling on *Lafarge Canada Inc. v. Ontario Environmental Review Tribunal et al.* of June 18, 2008 (leave to appeal to the Ontario Court of Appeal denied), indicates that ministries should be considering their SEVs – including such concepts as cumulative effects, where applicable – not just for broad policies and legislation, but also for site-specific approvals on instruments.

MNR's current SEV, finalized in October 2008, directs that the ministry will document how its SEV is considered each time a decision is posted on the Environmental Registry. In a more definitive fashion, the SEV states that MNR will consider its SEV when decisions that might significantly affect the environment need to be made as it develops Acts, regulations, and policies. However, the SEV does not make any reference to the ministry considering its SEV for instruments, such as approvals under the *ARA*.

MNR's SEV also does not explicitly acknowledge the need to consider cumulative effects. However, it does refer to related concepts. It states, "An ecosystem approach to managing our natural resources enables a holistic perspective of social, economic and ecological aspects and provides the context for integrated resource management." In contrast to the contents of the SEV, the decision notice on the Environmental Registry for the new SEVs states,

In reference to their own SEVs, the Ministry of the Environment and the Ministry of Natural Resources are working to develop the long-term tools, including science, policies and guidelines to support the application of an ecosystem approach, including consideration of cumulative effects, to environmentally significant decision making.

The Minister of Natural Resources has taken a more clear position on this issue. In a letter to a member of the public in January 2009, the Minister of Natural Resources stated, "When making environmentally-significant decisions at the instrument level... MNR intends to consider its Statement of Environmental Values (SEV) and cumulative effects."

The ECO hopes that MNR and MOE will adhere to the *EBR*, uphold the Ontario Divisional Court ruling, and consider their SEVs when making decisions on instruments that might significantly affect the environment. The ECO will closely monitor how MNR and MOE consider cumulative effects in their decision making and will review this issue in future Annual Reports.

For ministry comments, please see page 162.

3.4 Bill 150, Ontario's *Green Energy and Green Economy Act, 2009*

On May 14, 2009, the *Green Energy and Green Economy Act, 2009* (GEGEA) received Royal Assent by the Lieutenant Governor. The GEGEA is an omnibus renewable energy law that enacts the *Green Energy Act, 2009* (GEA); amends the *EBR*; and repeals both the *Energy Conservation Leadership Act, 2006* and the *Energy Efficiency Act*. As this legislation was passed just six weeks after the end of the ECO annual review period, this summary should be regarded as a "preview" of the GEGEA and GEA.

The *Green Energy Act, 2009* will have the potential to truly transform the energy landscape of Ontario with a vision for a "greener" economy. Its scope is broad and comprehensive, encompassing a three-pronged approach:

1. a strong focus on energy conservation and energy efficiency by promoting a "culture of conservation";
2. support for renewable electricity generation; and
3. development of a smart grid to integrate, transmit and distribute this green energy across Ontario's electricity distribution grid.

The GEA's focus on conservation and energy efficiency would place Ontario at the North American forefront by mandating energy efficiency as a central goal of the Ontario Building Code, as well as by

requiring Energy Star standards for home appliances, and by greening the Ontario public service. The benefits of these activities would be distributed across the province, engaging all regions, sectors and demographic groups in the process.

The ECO has recommended stronger provisions for conservation and renewables in past Annual Reports (i.e., 2002/2003, page 61; 2006/2007, page 86, and 2007/2008, page 20). The GEA is intended to encourage the development of renewable energy projects (solar, hydroelectric, wind, biomass, biogas, and geothermal) within the province through the introduction of attractive incentives and guaranteed feed-in tariffs, improved access to the grid and the establishment of a streamlined approvals process.

The GEGEA has significant implications for the Office of the Environmental Commissioner of Ontario. It amends section 58.1 (1) of the *Environmental Bill of Rights, 1993 (EBR)* to require the Environmental Commissioner to report annually to the Speaker of the Assembly on the progress of activities in Ontario to "reduce the use or make more efficient use of electricity, natural gas, propane, oil and transportation fuels." Further, the Act amends section 58.2 (1) of the *EBR* to require the Environmental Commissioner to report annually on the progress of activities in Ontario to reduce emissions of greenhouse gases and, in particular, to include "a review of any annual report on greenhouse gas reductions or climate change published by the Government of Ontario" in the year covered by the report.

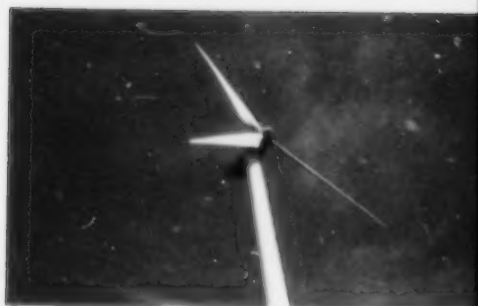
The ECO will review this legislation, the extensive public consultation carried out in its development, and the potential long-term implications of the Act in more detail in our next Annual Report.

3.5 Too Close for Comfort: Separation Distances between Industrial Facilities and Residences

Background

In June 2007, Collingwood Ethanol (CE) began manufacturing fuel-grade ethanol from corn using the wet milling process. Located within an industrial park in the east end of the Town of Collingwood, CE is approximately 210 to 830 metres west of various sections of the Blue Shores residential area and within 115 metres of another residential area. Since then, the Ministry of the Environment (MOE), Collingwood and CE have received hundreds of complaints from residents about odour and noise discharges. MOE investigated and in 2008 laid 17 charges under the *Environmental Protection Act (EPA)* and issued two Director's Orders. MOE also advised CE that if contraventions continued after August 31, 2008, further actions would be taken.

When residents in the area continued to complain about odour and noise problems, an MOE Provincial Officer (PO) investigated, visiting the area on at least 10 occasions. The PO confirmed that odour and noise levels in the area still exceeded the maximum levels that CE was allowed to discharge under its Certificate of Approval (C of A) for Air. The PO also



concluded that odour and noise discharges were causing an adverse effect (a contravention of section 14(1) of the *EPA*), as well as discomfort to persons, loss of enjoyment of normal use of property and/or interference with the normal conduct of business (a contravention of section 33 of O. Reg. 419/05 – Local Air Quality, made under the *EPA*).

Control Order

On January 29, 2009, MOE issued a Control Order requiring CE to immediately cease contravening the *EPA* and O. Reg. 419/05. The Control Order also requires CE to submit a written report to MOE within 24 hours of receipt of notification from MOE that CE may be a source of a contaminant that is causing an adverse effect. In the report, CE must describe the measures that it is taking to control the discharges. MOE advised CE that, if the measures are ineffective, it may require CE to cease operations. (For a more detailed review of this decision, please see Section 4.2 of the Supplement to this Annual Report.)

Public Participation

Most of the 117 commenters on the draft October 2008 Control Order asked MOE to shut down the facility either temporarily or permanently. Commenters explained that they have been forced to stay indoors to avoid foul odours and/or excessive noise and have suffered headaches, nausea and other health effects. The Collingwood East Environmental Action Committee (CEEAC) advised that a temporary closure was required since the area has been adversely affected for an extended period of time. In addition, CEEAC pointed out that closing the facility would protect the community from further harm and compel CE to implement a solution. CEEAC supported its comments with odour and noise readings taken by MOE that exceeded levels allowed in CE's C of A (Air).

CE also commented on the draft Control Order stating that it was shut down when some of the complaints were received and that recent independent odour testing had indicated that it was in compliance. According to CE, "a great many noise and odour abatement actions ... in most cases under the auspices of Provincial Officer's Orders" have been taken and more are planned. Other commenters noted that the odour issues have remained the same or even improved since the time another company manufactured starches at the facility.

Land Use Planning Guidelines

MOE has several guidelines, last revised in 1995, to help municipalities make appropriate land use decisions. In Procedure D-1-1 (Land Use Compatibility: Procedure for Implementation), MOE explains that municipalities must protect residential areas and other sensitive land uses from "facilities"; the ministry suggests that municipalities use separation distances and other types of buffers to reduce odour and noise discharges from industry to the "trivial impact level." Facilities are defined broadly to include not only industrial plants, but transportation, commercial, utility and certain agricultural facilities as well.

In Guideline D-6 (Compatibility Between Industrial Facilities & Sensitive Land Uses), MOE establishes three minimum separation distances based on the probability that an air discharge from an industrial facility will be a "major annoyance" to sensitive receptors, such as residences, schools and hospitals. In Guideline D-6,

MOE also acknowledges that the areas encompassed by the minimum separation distances are considerably less than the areas that may actually be affected by industrial air discharges. As a result, minimum separation distances may not protect all receptors from the effects of odour and noise discharges.

ECO Comment

The ECO strongly supports the goal of further urban intensification. However locating industrial facilities in close proximity to residential neighbourhoods, schools, hospitals, parks and other sensitive land uses is problematic and requires careful planning. The federal, provincial and municipal governments all issued approvals to CE in the belief that air discharges from CE would not adversely affect residents. However, regulatory and abatement strategies so far have failed in this case, despite a significant investment in technology by CE. In addition, separation distances have not mitigated the effects of discharges to a "trivial impact level" on the neighbouring residential areas. The ECO urges MOE to consider a more aggressive approach to ensuring compliance with legislative requirements in this case.



In general, locating facilities with potentially highly odorous or noisy discharges in close proximity to sensitive land uses or vice versa requires due diligence, adherence to stringent environmental standards, and effective abatement and enforcement measures in order to avoid problems. The use of separation distances to mitigate the effects of discharges can also be helpful.

The ECO believes that MOE should review its existing planning guidelines, particularly the guidelines on separation distances. These guidelines seem to delineate separation zones that can be much smaller than zones of significant impact and do not seem to protect receptors from adverse effects.

For ministry comments, please see page 162

3.6 No Bike Lanes on Bloor: The Bloor Street Transformation Project

In August 2008, an application for investigation was filed on behalf of two cycling advocacy groups alleging that in misclassifying the Bloor Street Transformation Project under the Municipal Class Environmental Assessment (MCEA), the City of Toronto contravened the *Environmental Assessment Act (EAA)*. The applicants argued that as a result, the city failed to hold broad public consultations or consider design alternatives that would make more room for cyclists on the redesigned street.

The purpose of the project is to beautify Bloor Street in Toronto between Church Street and Avenue Road by widening and resurfacing sidewalks and reconstructing the road. The road construction, which will retain the four existing traffic lanes, will be paid for by the city. The remaining work will be paid for through a city loan to the members of the Bloor Street Business Improvement Area (BSBIA). The project was classified in

2001 under the MCEA as a Schedule A project (which, being the lowest classification, does not require public consultation). After the MCEA was revised and approved by the Ministry of the Environment (MOE) in 2007, the project was re-classified as a Schedule A+ project.

Since the estimated cost of the project is \$25 million, the applicants argued that the project exceeds the MCEA threshold and requires at least a Schedule B designation and perhaps even a Schedule C designation. The applicants argued that if the project had been properly classified as a Schedule B project, the public would have been consulted and able to promote the consideration of cycling infrastructure in the street's redesign. The applicants also alleged that the city is ignoring directions in provincial planning laws and policies that require consideration of cyclists' safety in municipal planning decisions. Furthermore, the applicants submitted evidence of the adverse impacts of motor vehicle pollution to support their claim that the project would cause environmental harm.

In August 2008, a group called the Concerned About Bloor Coalition (CABC) announced it would seek a judicial review (JR) of the city's classification of the project. Two months later, Ontario's Divisional Court dismissed the JR application, concluding that the classification of the project was reasonable and that the project appeared to fit within Schedule A in 2001 and, subsequently, within the new Schedule A+.

On October 21, 2008, MOE denied the application for investigation, stating that it had already considered the applicants' concerns and received the relevant environmental assessment documents from the city. MOE went on to describe the obligations of a proponent under the MCEA, noting that "the description of the undertaking is determined by the proponent and may be defined in broad terms or in very specific terms." In MOE's opinion, the city complied with the MCEA and, therefore, an investigation into whether a contravention had occurred was unwarranted.

ECO Comment

While we believe that MOE's decision not to investigate was reasonable, the ECO is troubled by some of the implications of the application and the MCEA process followed by the City of Toronto.

For more than a decade, the ECO has raised concerns about consultation processes used for projects approved under Class EAs. In our 2007/2008 Annual Report, we noted public complaints about problems and deficiencies with proponent consultation processes, and MOE's apparent lack of interest in promoting fairness and adherence to Class EA requirements outlined in approval documents such as the MCEA.

This application also illustrates how difficult it can be for the public to gain access to (or even learn about the existence of) EA approval documents. The ECO is disappointed that MOE was slow to provide documents requested by the applicants, forcing them to make requests under the *Freedom of Information and Protection of Privacy Act*. The ECO is also concerned that MOE provided the public with incorrect information about the MCEA and the EAA on a number of occasions and that MOE staff were confused as to the proponent of the project, the legal status of the BSBIA and its relationship to the city.

These observations suggest that MOE does not have sufficient resources to properly monitor the large number of Class EA approvals being issued under the EAA, and that MOE staff need better training and information about the nuances of the MCEA and other Class EAs. This review also demonstrates that MOE continues to rely on a complaint-based compliance model, and the ministry is reluctant to prosecute proponents for failures to comply with the terms of approvals under Class EAs and the EAA. The ECO

urges MOE to develop an enforcement policy that applies to alleged contraventions of the *EAA*.

The ECO believes that the city could have undertaken a more transparent consultation process in this case, and MOE should have dealt with this aspect of the application more thoroughly. Some of the applicants' concerns could have been avoided, in part, if the MCEA required municipalities to publicize the classification of all MCEA projects. The ECO urges MOE to review these provisions of the MCEA and consider ordering appropriate amendments.

The application raises broad societal implications related to the sharing of roads by motorists and cyclists. While its straightforward street grid and relatively flat topography give Toronto the potential to become a great cycling city, this potential is unlikely to be achieved without leadership and support from the Ontario government to develop a cycling infrastructure. We urge Ontario ministries that oversee municipal planning to encourage municipalities and planners to engage cyclists in their deliberations on planning and uphold the spirit of the Provincial Policy Statement, 2005. To facilitate improved planning that promotes cycling and walking in Ontario communities, MOE should consider ordering the Municipal Engineers Association (MEA) to prepare modifications of the MCEA, as it did in 2007 to promote public transit.

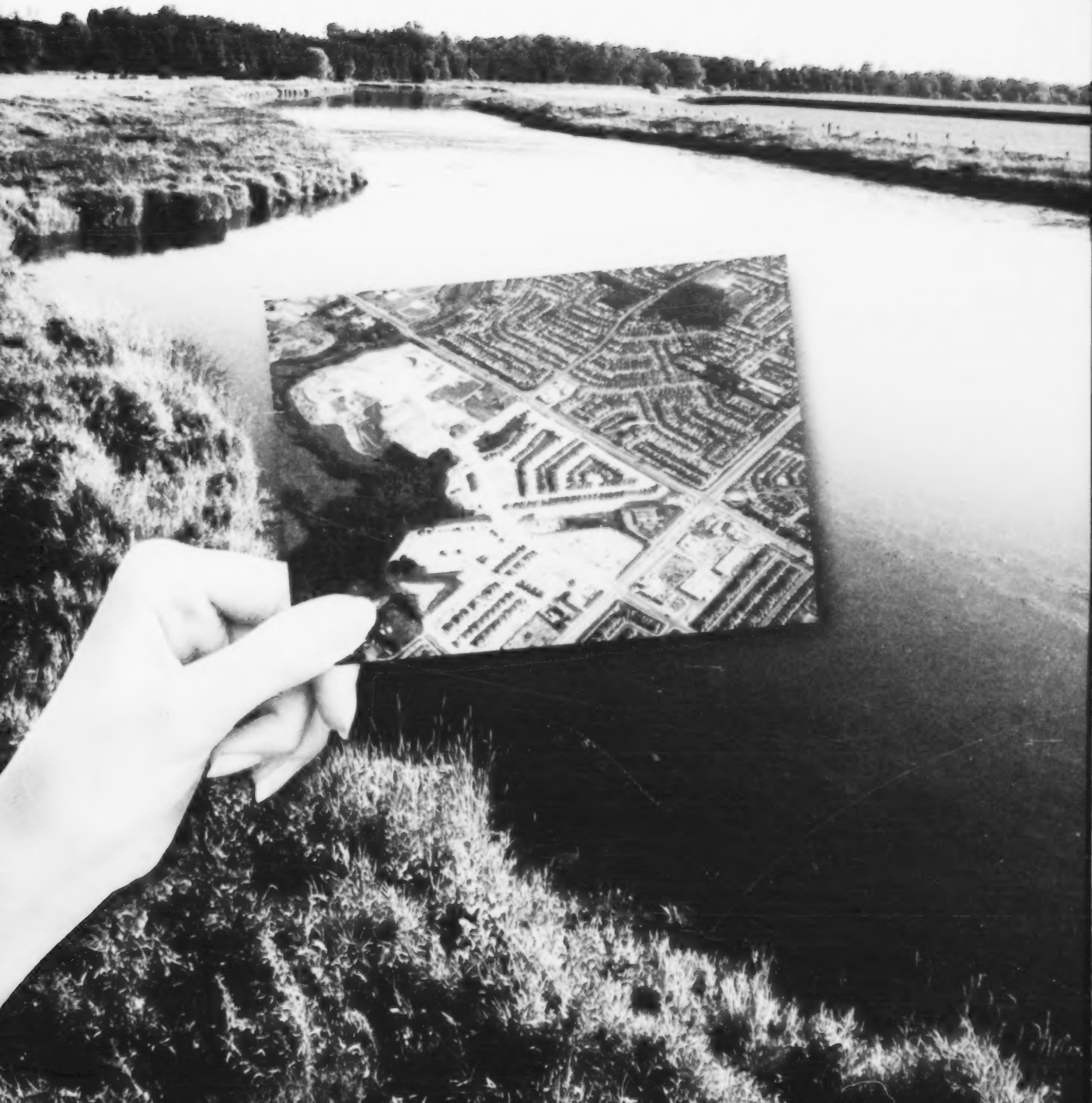
Recommendation 4: The ECO recommends that MOE consider ordering the Municipal Engineers Association to amend the Municipal Class Environmental Assessment to explicitly promote cycling and walking as modes of transport.

For a more detailed review of this decision, see Section 6.1.4 of the Supplement to this Annual Report.

For ministry comments, please see page 162.



Part 4: Building Resilience in the Protection of Biodiversity and Resources



How does one protect biodiversity across a landscape as vast as Ontario? It is clearly a complex responsibility that cannot be laid at the feet of a single agency or level of government. At the provincial level, many ministries must collaborate to protect biodiversity; to adapt their legislation and practices as priorities and urgent needs arise, each acting within its own sphere of power and influence, but hopefully each also reinforcing and supporting the work of sister agencies. This past reporting year, the ECO asked ministries to outline their own plans and actions to protect biodiversity. The responses, summarized in the following section, demonstrate that these ministries are at least beginning to grapple with their roles in this challenging and evolving assignment.

This section also describes and comments on two recent MOE initiatives that, each in its own way, should help enhance the resilience of Ontario's biodiversity. One is landmark legislation banning the cosmetic use of pesticides province-wide, a step that some municipalities had already taken, and that should (among other things) reduce the stresses caused by pesticides on many species of pollinating insects, and on birds and other insect-eaters. The other is essentially a guidebook for those attempting to clean up waterbodies burdened by contaminated sediments. The guidebook, developed collaboratively with federal agencies, advocates a science-based site-specific evaluation of contaminant impacts on the local ecosystem. These evaluations will help proponents and communities weigh remediation options, as a prelude to allocating scarce clean-up dollars.

This section also discusses the biodiversity implications of burning forestry "wastes" for fuel – an approach that MNR is encouraging with a new biofibre policy. Transforming waste to energy and revenue certainly is attractive from a short-term efficiency standpoint. But there are long-term cycles in play too. An appreciation of resilience dynamics would encourage managers to think hard about the long-term ecosystem functions of these "wastes," including their role as reserve capital, held in store for the next generation. If nutrient-rich branches, needles and leaves are increasingly harvested rather than left on the forest floor to decompose, what will be the consequences for nutrient cycling? What increased stresses may this place on forest soil fertility, on communities of soil micro-organisms and on future forests?

What might amphibians and farm soils have in common? They both tend to have low public profiles – they are hidden from view, not much considered in high level policy, and little monitored. In this section, the ECO has examined the status of both amphibians and agricultural soils as illustrative case studies of Ontario's natural resources and biodiversity. We know from history and current headlines that both amphibian species and the integrity of agricultural soils can exhibit calamitous collapses, and that restoration can be extremely difficult. To what extent are our management approaches recognizing and responding to the often site-specific or time-specific vulnerabilities of these ecosystem components? What steps can we take to strengthen their resilience?

4.1 Protecting Biodiversity: Ministries Stake Out Roles

The year 2010 will mark a turning point in the conservation of the world's biodiversity. Almost every country on Earth, including Canada, will meet in Japan to chart a bold path forward to meet the challenges of this global environmental issue. The international community has firmly committed "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth." The 2010 Biodiversity Target was endorsed by the United Nations General Assembly.

Ontario is home to over 4,000 types of plants, 154 fish species, 78 different mammals, 53 amphibians and reptiles, and close to 500 bird species, ranging from beluga whales off the coast of Hudson's Bay to monarch butterflies that migrate annually from Mexico.

Experts from around the planet have described the current rate of species loss as a mass extinction. Unlike extinction events in the Earth's more distant past, human impacts on the natural world are primarily responsible for this species loss. The most significant threats are habitat alteration and loss, climate change, invasive alien species, overexploitation, and pollution.

The Ontario government has a crucial role in protecting and restoring biodiversity. The Ministry of Natural Resources (MNR) released Ontario's Biodiversity Strategy in 2005, setting out "long-term direction and practical steps that can be achieved, measured and reported on in the next five years." At the time, the strategy represented a significant step forward as the Ontario government first recognized its responsibility to conserve the province's biodiversity. However, serious shortcomings of this strategy have gone largely unaddressed. The strategy does not specify the responsibilities of the different government ministries, set out timelines to accomplish objectives, or establish measurable targets.



Ontario's Biodiversity Strategy contains 37 recommendations. Upon its initial release, 10 priority actions were identified and were scheduled to be initiated in 2005. Since that time, no new priority actions have been publicly identified. Based on this apparent lack of government momentum, the ECO recommended in our 2007/2008 Annual Report, that "all prescribed ministries develop detailed action plans that specify the measures to conserve biodiversity that they will undertake." The ECO obtained updates from eight ministries, which describe their perceived responsibilities and their actions to conserve Ontario's biodiversity.

Ministry of the Environment (MOE):

MOE states that its focus is to reduce the impact of pollution on biodiversity. The ministry asserts that Ontario's Clean Air Action Plan, its role in nutrient management on farms, the *Clean Water Act, 2006*, the *Lake Simcoe Protection Act, 2008*, and the Canada-Ontario Agreement on Great Lakes Water Quality contribute to biodiversity conservation. MOE also has several monitoring programs that help in the assessment of potential impacts on biodiversity, including water quality monitoring of inland lakes and the nearshore of the Great Lakes.

Ministry of Energy and Infrastructure (MEI):

MEI states that it is targeting three of the five main threats to biodiversity: climate change, habitat loss, and pollution. The ministry maintains that actions to be taken in Ontario's electricity sector, including the coal replacement plan, will play an important role in achieving the government's greenhouse gas emissions reduction targets. MEI asserts that the electricity sector is expected to contribute 44 per cent of the emissions reductions needed to reach the 2014 target of a 6 per cent reduction below 1990 levels. MEI states that it also is working to reduce air pollution through the promotion of cleaner sources of energy. MEI believes that the Growth Plan for the Greater Golden Horseshoe will contribute to biodiversity.

conservation. The ministry maintains that this plan “helps Ontario avoid the negative impacts of unchecked growth, including urban sprawl that leads to the elimination of natural areas.” Higher intensification targets for urban growth will also help in reducing the environmental footprint of development. MEI also states that it protects ecologically significant properties by transferring title or entering into agreements with other agencies or levels of government for lands.

Ministry of Transportation (MTO):

MTO states that its transportation planning, design, construction, operations, and maintenance are carried out in support of conserving biodiversity. The ministry asserts that its transportation planning and highway design processes protect the habitat of species at risk, as well as maintaining the diversity of habitat for other wildlife. MTO states that its Environmental Standards and Practices explicitly support biodiversity conservation. It is also developing an environmental management system to address compliance issues with the “ultimate goal to implement continuous improvement to environmental performance including protecting biodiversity.”

In June 2008, MTO began the development of a corporate sustainability strategy. The ministry states that the strategy will commit MTO “to being more accountable for its social, economic and environmental impacts.” Over the next 24 months, the ministry will also be reviewing its Statement of Environmental Values (SEV) to consider ways to strengthen it, including “a more formal incorporation of a biodiversity objective.”

Ministry of Culture (MCL):

MCL states that it “does not have any legislative mandate or jurisdiction, nor any non-legislative program responsibility, directly related to the conservation of Ontario’s biological diversity.” The ministry notes that the *Ontario Heritage Act* was amended in 2005, which included changes to the powers of the Ontario Heritage Trust. These changes included the conservation and protection of property of “natural” interest, which could assist in the conservation of biodiversity.

Ministry of Municipal Affairs and Housing (MMAH):

MMAH states that it integrates biodiversity conservation into land use planning through the Provincial Policy Statement, 2005 (PPS), the *Planning Act*, and provincial plans. For example, the ministry asserts that the Greenbelt Plan “provides full protection for about three-quarters of the Greenbelt’s lakes, wetlands and forests.” The ministry maintains that the PPS provides for the long-term ecological function and biological diversity of natural heritage systems. MMAH also states that the *Planning Act* identifies the protection of ecological systems as a provincial interest; this legislation provides municipalities with tools that can be used to protect biodiversity. For example, municipalities can enact zoning by-laws to restrict the use of land in areas that are significant wildlife habitat, wetlands, woodlands, ravines, valleys, or areas of natural and scientific interest or that are significant natural corridors, features or areas.

Ministry of Northern Development and Mines (MNDM):

MNDM states that the ministry's approach to biodiversity conservation is directed by the *Mining Act*, the purpose of which is "to encourage prospecting, staking and exploration for the development of mineral resources and to minimize the impact of these activities on public health and safety and the environment through rehabilitation of mining lands in Ontario." The ministry also relies on its SEV, its Abandoned Mines Rehabilitation Program, government reforms to regulating brownfield redevelopment, and the mine closure requirements to assist in conserving Ontario's biodiversity.

Ministry of Food, Agriculture and Rural Affairs (OMAFRA):

OMAFRA states that its policies and programs relate in varying degrees to 11 of the 37 recommended actions in Ontario's Biodiversity Strategy. The ministry is responsible for actions related to Environmental Farm Plans (EFPs) and the adoption of best management practices (BMPs) on Ontario farms, which have a significant bearing on biodiversity conservation.

The ministry states that, between 2005 and 2008, 11,778 farm businesses or 23.8 per cent of Ontario farms completed the latest version of the EFP. In that same period, 5,683 farms implemented 13,727 best management practices with an approximate investment of \$100 million dollars in government funding. Of this total, the Canada-Ontario Farm Stewardship Program and the Environmental Farm Planning Program provided \$643,000 to implement 210 projects designed to prevent wildlife damage.



OMAFRA is responsible for the *Nutrient Management Act, 2002 (NMA)*, which has indirect benefits for biodiversity such as improved water quality and aquatic habitat. As of 2008, approximately 2,200 farm units covering 250,000 hectares were subject to the NMA. Almost 4,500 nutrient management BMPs have been implemented as part of EFPs.

OMAFRA notes that it "worked with MNR to ensure the new *Endangered Species Act, 2007* provided the right provisions to accommodate activities that have no impact on species at risk and to promote stewardship activities." Working with municipalities, the ministry also administers the compensation program for livestock or poultry that are injured or killed by wildlife. OMAFRA also works with MNR and the Canadian Food Inspection Agency (CFIA) on invasive species issues.

Ministry of Natural Resources (MNR):

MNR states that, "Conserving biodiversity is essential to Ontario's prosperity and the health and well-being of Ontarians. Ontario is at a crossroads and is taking action to conserve and protect biodiversity after centuries of loss and to ensure a natural legacy for our children." The ministry is working to address 19 of the 37 recommended actions in Ontario's Biodiversity Strategy.

The Far North Planning Initiative will conserve more than 50 per cent of northern Ontario, totalling about 225,000 square kilometres. According to MNR, conserving this area will be one of "Ontario's greatest tools

for fighting climate change.” As part of this initiative, the MNR is also undertaking extensive scientific mapping of the region’s biodiversity, carbon sequestration potential, Aboriginal cultural heritage, and natural resources.

MNR asserts that the updated *Endangered Species Act, 2007* is a key component in conserving Ontario’s biodiversity. In April 2009, the ministry also released a draft Woodland Caribou Conservation Plan. Additionally, MNR is reviewing a range of its wildlife policies, including those for deer, moose, bears, and wild turkeys.

The ministry conserves biodiversity through its implementation of the new *Provincial Parks and Conservation Reserves Act, 2006*. MNR is now developing a new Protected Areas Planning Manual and supporting guidelines, as well as releasing a State of Ontario’s Protected Areas Report sometime in 2009. The ministry also prepares management direction for protected areas, giving “consideration to abating threats to biodiversity” and protecting species at risk.

The ministry has introduced a new Ecological Framework for Fisheries Management. It also has worked toward the development of bi-national Biodiversity Conservation Strategies for Lake Huron and Lake Ontario which will advance efforts to rehabilitate, maintain and protect the biodiversity of these two lakes and their watersheds.

MNR is updating its forest management guides, including those for the Great Lakes-St. Lawrence Landscapes, Boreal Landscapes, and Conserving Biodiversity at the Stand and Site Scales. MNR has also proposed changes to its Forest Management Planning Manual and Forest Information Manual. In 2010 and 2011, the ministry anticipates reviewing its Forest Resource Assessment Policy, Old Growth Policy for Ontario’s Crown Forests, Forest Operations and Silviculture Manual, and several silvicultural guides. The ministry is also preparing its 5-year Forest Management Class Environmental Assessment Review report which addresses MNR compliance with requirements for forest management planning under the *Environmental Assessment Act*.



MNR is working with partners to address the impact of invasive species on Ontario’s biodiversity by raising awareness, engaging the public, and monitoring. MNR states that several provincial ministries are preparing an Ontario Invasive Species Action Plan which identifies gaps in programs, policies and legislation, and will help to direct further efforts.

ECO Comment

The ECO commends the Ontario government for recognizing that the conservation of the province’s biodiversity is its responsibility. The loss of biodiversity is a defining issue of our time, and future generations will judge us by the actions that we take today. Many different ministries of the Ontario government have important individual roles to play in our collective effort to meet this challenge. Progress has been made in some key areas since the release of Ontario’s Biodiversity Strategy in 2005.

Ontario’s Biodiversity Strategy outlined initiatives to be undertaken between 2005 and 2010. As the year 2010 nears, the ECO believes that the Ontario government, led by MNR, should revise its strategy in order

to outline future actions to address this environmental crisis. The 2010 international review represents an ideal opportunity to assess lessons learned and to build on actions of other governments.

In April 2009, leaders of the G8 countries and 11 additional nations signed the Syracuse Charter, reaffirming the commitment of these countries, including Canada, to conserve biodiversity within their boundaries and around the globe. The Charter sets the stage for what governments must do beyond year 2010 – the United Nations' International Year of Biodiversity. The Syracuse Charter states:

The multiple challenges that the world faces today are an unmistakable indication that we need to strengthen our efforts to conserve and sustainably manage biodiversity and natural resources.... As significant economic loss arises due to the unsustainable use of biodiversity, timely and proper programmes and actions, aimed at strengthening the resilience of ecosystems, must be taken.

The year 2010 will mark the opportunity to chart a new path forward. The Ontario government has the ability to be a champion of biodiversity and a world leader in combating this environmental crisis. The public expects no less. Whether biodiversity is interpreted as a key resource or inherently valued for its own sake, the Ontario government cannot afford to address this environmental crisis with anything less than the highest priority. The ECO will continue to report on the actions that ministries prescribed under the *EBR* take to conserve Ontario's biodiversity.

For ministry comments, please see page 163.

4.2 Amphibian Declines: Canaries in Our Global Coal Mine?

Beginning in the late 1980s, biologists started noticing that an alarming number of amphibian species were declining and going extinct around the globe. Since then, scientists have come to realize that amphibians, which include frogs, toads, newts and salamanders, are declining more rapidly than any other class of animal. These declines and extinctions appear to represent a unique amphibian crisis, a crisis the International Union for Conservation of Nature (IUCN) claims is "the worst we have ever faced."

The Loss of Amphibians

Amphibian declines are troubling for several reasons. Amphibians are an important component of many terrestrial and aquatic ecosystems. Amphibian eggs, larvae, and adults provide an important food source for fish, birds and mammals. Conversely, as predators, amphibians eat enormous numbers of insects, algae and detritus. Amphibian declines can therefore drastically alter the integrity of ecosystems. Moreover, diversity of amphibian species, as well as biodiversity in general, is a major source of ecosystem potential: species extinctions reduce the resilience of an ecosystem to respond to change.

The physiology and life cycle of amphibians also make them excellent indicators of ecosystem health. Because most amphibians have aquatic and terrestrial life stages, population declines can signify changes in both types of environments. Moreover, because amphibians have moist, permeable skins, they are in

intimate contact with their environment and susceptible to changes in water and air quality. As cold-blooded animals, amphibians are also sensitive to changes in temperature.

The fact that this ancient and historically resilient group of vertebrates – a class that has survived through mass extinctions that decimated other species – is declining now, not only points to the potential role of humans in their demise, but underscores the critical state of biodiversity loss around the planet.

Status of Amphibians in Ontario

Of the 27 amphibian species and subspecies native to Ontario, eight are classified as at risk under Ontario's *Endangered Species Act, 2007 (ESA)*. The scarcity of some species in Ontario, however, may be partly because Southern Ontario represents the northern limit of their distribution and they were never common or widespread here. While populations at the edge of a species' range have been viewed by some as of limited conservation concern, these populations are important because they are often genetically distinct and necessary to preserving the genetic diversity and long-term survival of the species.

Table 1: Amphibian Species in Ontario

Common Name	MNR Status
Allegheny mountain dusky salamander	Endangered (recovery strategy in preparation)
blue-spotted salamander	Specially Protected Amphibian
central newt	
eastern red-backed salamander	Specially Protected Amphibian
four-toed salamander	Specially Protected Amphibian
Jefferson salamander	Threatened (recovery strategy submitted to MNR)
mudpuppy	Specially Protected Amphibian
northern dusky salamander	Endangered (recovery strategy in preparation)
northern two-lined salamander	Specially Protected Amphibian
red-spotted newt	
small-mouthed salamander	Endangered (recovery strategy not yet initiated)
spotted salamander	Specially Protected Amphibian
spring salamander	Extirpated (recovery strategy not initiated; MNR committed to preparing one by June 30, 2013)
tiger salamander	Extirpated, Specially Protected Amphibian
American bullfrog	Game Amphibian
American toad	
boreal chorus frog	
Fowler's toad	Threatened (recovery strategy submitted to MNR)
gray treefrog	Specially Protected Amphibian

green frog	
mink frog	
northern cricket frog	Endangered (recovery strategy submitted to MNRI); Specially Protected Amphibian
northern leopard frog	
pickerel frog	
spring peeper	
western chorus frog	
wood frog	

Note: The ESA prohibits the killing or harming of threatened and endangered species, as well as the destruction of their habitat. Under the Fish and Wildlife Conservation Act, 1997 (FWCA), it is prohibited to hunt or trap specially protected amphibians. Under the FWCA, farmers and licensed persons can hunt or trap game amphibians.

Over the last several decades, declines have been observed in several amphibian species in Ontario, including the spring peeper, Jefferson salamander, pickerel frog, northern cricket frog, bullfrog and northern leopard frog.

Threats to Ontario's Amphibians

There is no simple explanation for amphibian declines. Rather, it seems that several natural and human-caused factors interact to affect populations in complex and synergistic ways.

Habitat Loss

The primary threat to amphibians in Ontario appears to be historic habitat loss, resulting from deforestation, road construction, urbanization, and the conversion of natural areas to agricultural use. Although many amphibians require wetland habitat for shelter and breeding, approximately 70 per cent of southern Ontario wetlands have been drained for agriculture and urban development.

Several provincial policies, acts, and plans provide general protection to habitats important to amphibians. Unfortunately, the common thread amongst these instruments is that exceptions still allow resource extraction and the development of infrastructure in or very near amphibian habitat. For example, the Provincial Policy Statement (PPS) allows aggregate extraction and infrastructure (including highways and oil and gas pipelines) in wetlands, woodlands and wildlife habitats. Likewise, if no other viable locations are available, the Greenbelt Plan (GBP) allows transportation and other infrastructure to be built in wetlands.

Even when infrastructure is built around greenbelt wetlands, the required vegetated buffer of 30 metres is likely inadequate to protect viable populations of pool-breeding amphibians. Amphibians can travel up to about one kilometre from wetlands, so scientists recommend that buffer zones around important wetlands be roughly this size. While Ministry of Natural Resources (MNRI) forest management policies recognize the importance of protecting amphibian habitat and direct that buffers be retained around wetlands and woodland pools, again these buffer widths may be insufficient.

Ontario's system of provincial parks and conservation reserves offers some protection to amphibian habitat. However, these areas cover less than 10 per cent of the province's land base. Furthermore, activities outside protected areas can still threaten amphibian populations within them. The declines of several amphibian species in Point Pelee National Park illustrate that outside threats can compromise these systems.

Habitat Degradation

Amphibian habitat in Ontario that has not been completely lost often suffers from environmental degradation. Even years after their application, environmental contamination by certain pesticides and other agricultural chemicals can cause developmental deformities, behavioural changes, and death in amphibians. Amphibians are very susceptible to nitrogen-based fertilizers, particularly in the larval stage, and the accumulation of phosphorus in ponds and creeks can cause algae to proliferate, depleting oxygen from the water.

The degradation of amphibian habitat can also result from contamination by mercury, road salts, and pharmaceuticals and personal care products (PPCPs). Although little is known of the chronic, multi-generational effects of PPCPs on non-target organisms like amphibians, waste pharmaceuticals can act as endocrine disruptors that affect amphibian growth, development and reproduction.

The Ministry of Transportation (MTO) and the Ministry of the Environment (MOE) have made some progress in reducing the amount of salt placed on roads. However, the ECO still urges MOE to develop a comprehensive, mandatory, province-wide road salts management strategy to ensure aquatic and terrestrial ecosystems are protected from chlorides.

Habitat Fragmentation

Even when good habitats remain, habitat fragmentation by roads, development and other barriers can cause population declines. If ponds and wetlands are isolated and separated by inhospitable habitat, migrating amphibians may be unable to reach breeding, summering and hibernation sites. The fragmentation of amphibian populations into small, isolated sub-populations makes them susceptible to local extinctions caused by natural and manmade factors. Roads can also have negative population effects when amphibians become road kill.

MTO has established a Wildlife Mitigation Team to implement road kill mitigation projects (e.g., culverts and crossings) primarily for deer and other large wildlife at high priority areas throughout the Northeastern region. While the ECO applauds these initiatives and encourages the ministry to expand the program, the ECO recognizes that it is not in the ministry's mandate to monitor wildlife. The ECO reiterates our previous suggestion that MNR take responsibility for identifying amphibian "hot spots." We also repeat our recommendation that "MNR and MTO collaborate to monitor wildlife crossings on existing roads to determine where mitigation is required and to work together early in the road planning process to identify areas where wildlife passages will be necessary."



Unsustainable Harvesting

Although the precise effect of harvesting amphibian populations (e.g., for bait, dissection, or human consumption) is poorly known, evidence indicates that its impacts can be significant. Moreover, because frog populations can fluctuate widely due to natural stochastic factors (such as weather or disease), harvest levels that are sustainable one year can drive population levels to collapse the next. Harvesting has been suggested as partly responsible for substantial declines observed in Ontario bullfrog populations. Ontario's *Fish and Wildlife Conservation Act, 1997 (FWCA)* and *ESA* provide protection to several amphibian species from hunting and trapping (see Table 1).

Introduced Invasive Species

The introduction of non-native species frequently causes declines of native amphibian populations via predation, competition, the introduction of pathogens, and hybridization. Alien species of fish, bullfrogs and crayfish have been implicated as major contributors to amphibian population declines.



In Ontario, the introduction of non-native carp to breeding ponds is believed to have played a role in the decline of the northern cricket frog on Pelee Island. Likewise, one of the threats to the Jefferson salamander in Ontario is the introduction of fish to its breeding ponds. MNR's ban on the commercial harvest and sale of crayfish as bait (see Section 4.11 of the Supplement to this Annual Report) and guidelines for stocking fish are intended to help slow the introduction of invasive predators to amphibian habitats.

Emerging Infectious Diseases

Amphibian declines have been linked to infectious diseases, which appear to be rapidly increasing in incidence and virulence. In particular, the lethal fungal disease chytridiomycosis has been associated with at least 93 declining amphibian species worldwide and appears to be driving amphibian species to extinction. Although the disease does not yet seem to be a major problem in Ontario, a chytrid fungus pathogen has been confirmed as the cause of a bullfrog tadpole die-off first noticed in 2003 in Algonquin Park. The ECO encourages MNR to monitor incidences of this fungus in Ontario and the spread of the disease in similar temperate climates.

Another increasingly-reported cause of amphibian mass mortality events is Ranavirus, an infectious disease-causing virus. In Ontario, Ranavirus has been associated with mass mortality events of wood frogs and northern leopard frogs. Recent studies confirm that the conditions in which frogs are held in bait shops and the transfer of frogs across southern Ontario have contributed to the spread of the disease.

Accordingly, in March 2008, MNR banned the commercial harvest and sale of all bait frog species. For a detailed review of this decision, see Section 4.11 of the Supplement to this Annual Report.

While the ECO supports MNR's commercial bait ban, we believe that MNR should follow the lead of western provinces and also prohibit the personal use of northern leopard frogs as bait. Allowing individuals

to continue using frogs as bait fails to completely address the spread of Ranavirus. Moreover, stricter restrictions on the transport of amphibians in the province would help reduce the potential spread of chytridiomycosis.

Climate Change and Ozone Depletion

Climate change threatens amphibian populations in a variety of ways. Because amphibians are sensitive to environmental changes and have limited dispersal abilities, they may be unable to react quickly enough to temperature and moisture changes or more extreme weather events like thunderstorms and droughts. A warmer climate may also exacerbate other threats, including the spread of infectious diseases and the distribution of invasive species.

Because amphibians bask in the sun to maintain body temperature, have thin skins, and lay eggs near the water's surface, they are also at high risk of increased exposure to UV radiation resulting from the deterioration of stratospheric ozone. Exposure to UV radiation can affect hatching success, development and immune systems.

While Ontario policies and regulations have been developed to control the release of greenhouse gases and ozone-depleting substances, climate change and ozone depletion are caused by emissions both within and outside Ontario's borders. As a result, provincial mitigation efforts – though important – will be unable to fully prevent the impacts of those global environmental problems on Ontario's amphibians.



Monitoring Ontario's Amphibians

The purpose of MNR's Natural Heritage Information Centre (NHIC) is to track the location, condition, and distribution of all species potentially at risk in Ontario, and assign conservation status ranks to all species where basic knowledge exists. Unfortunately, an MNR review in 2001/2002 found that rare amphibians are inadequately inventoried, monitored, and assessed in the province. Moreover, the review found no capability to track common species, especially to identify and mitigate species declines. In other words, provincial monitoring of amphibians is reactive rather than pro-active.

In areas of forestry operations on Crown land, MNR carries out a Provincial Wildlife Population Monitoring Program (PWPMP) with the purpose of providing long-term trend data on representative terrestrial species. MNR admits, however, that there has been little in the way of long-term, broad-scale monitoring of amphibians. Of the 19 amphibian species found in the Area of the Undertaking, only the red-backed salamander is currently included under the PWPMP. The PWPMP is scheduled to complete a critical assessment of the state of amphibian populations in 2010.

Four volunteer-based programs, coordinated by Environment Canada, Bird Studies Canada and Nature Canada, monitor frog populations in Ontario. Although MNR's NHIC periodically receives and incorporates data from these surveys into its amphibian database and distribution maps, currently MNR does not directly participate in or fund these programs. Because these volunteer-based programs tend to sample in southern Ontario, none are able to assess the status of species with large or predominately northern Ontario ranges.

ECO Comment

The global decline of amphibians is worrisome, not only because of its ecological implications but also because it indicates that the world's ecosystems are in trouble. In Ontario, there is an opportunity to use amphibian populations as indicators of ecosystem health and protect habitats based on their needs.

The conservation of Ontario's amphibians, however, requires more than just a "conservation as usual" approach to protecting species in isolated refugia. The multitude of threats that amphibians face requires a novel and multi-pronged approach to conservation across the province. The IUCN calls on all governments to respond to the amphibian extinction crisis, stating that there needs to be an unprecedented commitment to developing policies that conserve these proverbial canaries in the global coal mine.

It is important to monitor amphibian populations in order to identify the early stages of population decline while there is still time to develop effective management approaches. Because changes in amphibian numbers can be difficult to detect, amphibian populations could suddenly crash beyond their threshold to recover, leaving little hope of preventing their demise.

The ECO commends the several volunteer-based monitoring programs for their work in Ontario. However, quantifying amphibian declines and identifying the underlying or causal factors in any kind of comprehensive manner will require long-term and wide-scale population monitoring. We believe MNR should play a central role in monitoring Ontario's amphibian populations rather than rely on Environment Canada and non-governmental organizations to track the status of "common" species. Furthermore, as important indicators of biodiversity that can tell us much about Ontario's ecological health, monitoring the status of amphibians should be a featured component of Ontario's Biodiversity Strategy.

The wide variety of threats to amphibians means that several Ontario ministries make decisions that affect amphibian populations. Consequently, all ministries that consider the environment in decision-making should consider their impacts on biodiversity, including amphibian populations. Moreover, because no one ministry has the mandate or capacity to address the broad range of issues that impact amphibian populations, there is a need to develop a coordinated interministerial amphibian conservation plan. MNR should take a lead role in developing and coordinating such a plan.

Recommendation 5: The ECO recommends that MNR develop and lead a coordinated interministerial plan to protect and conserve amphibian populations, reflecting the full range of threats and challenges.

For ministry comments, please see pages 163-164.

4.3 Forest Biofibre: To Burn or Not To Burn?

In August of 2008, the Ministry of Natural Resources (MNR) adopted a policy to guide the allocation, pricing and use of forest "biofibre" for energy production and other value-added end uses. It defines biofibre as "forest resources from Crown forests that are not normally being utilized for conventional forest products," and includes "tree tops, cull trees or portions of trees, individual and stands of unmerchantable and unmarketable trees, and trees that may be salvaged as a result of a natural disturbance." The main goals of the policy are to reduce Ontario's dependence on fossil fuels and to diversify and strengthen Ontario's economy.

The policy states that projects that benefit Aboriginal communities will be given higher priority and that developing technologies may provide new value-added opportunities in the near future. Accordingly, allocation decisions may include reserving some areas or volumes of forest biofibre in order to be able to respond to these priorities. The policy will be reviewed every five years.

For a more detailed review of this policy, see Section 4.10 of the Supplement to this Annual Report.

Implications of the Decision

Climate Change

Upon combustion, fossil fuels release to the atmosphere "old" carbon, which has been stored underground for millions of years; in contrast, the burning of biomass fuels releases "new" carbon, which was only recently absorbed by plants as carbon dioxide (CO_2) and will be taken up by plants again as part of the normal carbon cycle as they grow back to their original standing crop. Over the longer term, therefore, burning biomass for energy is superior to burning fossil fuels, as net carbon emissions are nil. This is why biomass combustion for energy is considered "carbon neutral." In the short-to-medium term, however, the benefits may be less than assumed. Recent research on the net effect of forest harvest on CO_2 emissions to the atmosphere indicates that the time-lag involved in the forest's regeneration and consequent uptake of the CO_2 is such that a substantial, short-to-medium term "debit" is incurred.

By providing an economic incentive for forest companies to move into areas that were previously considered uneconomic (those with numerous "unmerchantable and unmarketable" trees), the biofibre policy will almost certainly increase, perhaps substantially, the size of the annual cut. Much of this material will be burned to produce energy, releasing large amounts of CO_2 that will not be re-sequestered for decades.

The boreal forest is a fire-adapted ecosystem and it might not seem to matter if the wood is burned in a power-generating facility or in the forest, after all, the CO_2 is released to the atmosphere in either case. However, if large volumes of wood are harvested annually for biofuel, the government must successfully increase suppression of forest fires to a corresponding degree, or the total amount of wood burned annually will increase substantially. With climate change impacts potentially increasing forest fire risk, this may not be possible.

Moreover, the climate change benefits could be reduced by another factor: gas release from newly exposed soils. Clear-cutting methods lead to very large releases of nitrous oxide (N_2O), a very potent greenhouse gas, from forest soils for a period of several years after harvest; they also reduce the soil's capacity to absorb and hold methane (CH_4), another potent greenhouse gas.

The use of biofibre fuels may approximate carbon neutrality over the long term; however, it will not achieve this goal for several decades. As we approach what many climate scientists feel are crucial "tipping points," with increasing greenhouse gas emissions threatening major, irreversible change to our climate, these years will be critical.

Forest Sustainability and Biodiversity

The issue of how much wood residual should be left on the forest floor to prevent the depletion of nutrients is usually discussed in the context of harvesting methods. Tree-length logging (TLL) is a system where the slash (branches, tops, etc.) is removed at the stump and left on-site. With full-tree logging (FTL), the entire tree is dragged to the landing, where slash is either burned or left to decay. The percentage of forest lands being harvested using FTL rose to about 90 per cent in the late 1980s. The question is whether the amount of woody material typically left on-site after FTL (the leaves and branches that break off as the tree is hauled to the landing site) is sufficient to ensure sustainable forest regeneration.

MNR is conducting research to try to answer this question. Results to date indicate that for FTL sites, it takes more than 60 years to replace several nutrients in sandy, dry soils through natural processes. The standard rotation time in forest harvesting is 60 to 80 years. The study also indicated that replacement times for calcium (a key nutrient) are greater than 60 years for all soil types, for both FTL and TLL sites. Timing of nutrient availability is also important, with the first 15 to 20 years after harvest deemed the most sensitive. Nutrient supplies rise after harvest due to residues left on site. As the new trees start to grow, however, nutrient demand increases greatly while supply remains static because of insignificant litter fall from young trees. MNR's research work on this issue is entering its 15th year and, to date, the studies do not appear to demonstrate any significant differences between growth rates for young trees in FTL sites and TLL sites.

Guidelines based on these preliminary results have been incorporated into the new Stand and Site Guide (see EBR Registry Number 010-5218). The draft Guide, as proposed on the Environmental Registry on Nov. 27, 2008, does not include a separate set of guidelines or standards for biofibre removal. MNR scientists feel that the existing guidelines are sufficient, regardless of what end use is made of the wood. In the case of more sensitive sites (as defined in the Guide), harvesting guidelines are expected to provide adequate protection.

Some scientists, however, have expressed the concern that there is not yet enough information to assess the longer-term impacts of FTL; it has not been practiced long enough to provide evidence beyond a single generation of trees. Recent international studies suggest that the productivity of average forest soils decline over time under intense harvesting similar to the FTL system. Scandinavian studies suggest that FTL can reduce per-tree biomass growth even in the first post-harvest generation.

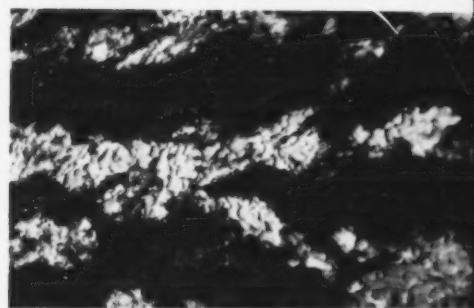
"Scandinavian studies suggest that FTL (full-tree logging) can reduce per-tree biomass growth even in the first post-harvest generation."

Another concern is the lack of significant attention being paid by MNR research to the impact of FTL and clear-cutting on soil micro-organisms, in particular mycorrhizal fungi. As soil ecologists continue to learn more about forest soils, they continue to stress the role of mycorrhizae in the health and productivity of virtually all forest plant species. Mycorrhizal fungi form symbiotic associations with plant roots, trading soil nutrients and water for sugars and other products of photosynthesis. They can also stimulate plant growth and help prevent plant diseases. Clear-cutting has been shown to reduce mycorrhizal populations, probably due at least in part to the reduction in organic residue.

The Resource Allocation Process

By making a "new" forest resource available in very large quantities, the ministry hopes to stimulate the development of a number of "green" industries. However, details on the allocation criteria are not provided, and the general policy statements do not reveal the extent of the ministry's commitment to high-value, environmentally beneficial end uses. If large quantities of forest biomass are committed to combustion for energy there may not be sufficient material available to support higher-value, more innovative, green applications that arise later.

Some of the new technologies being developed seem to offer many advantages over simple combustion of biofibre for heat and power. For example, pyrolysis converts biofibre into three separate products: "bio-oil," which can be upgraded into fuels, food additives, and pharmaceuticals; "biogas," which is burned to power the process; and "biochar," a type of charcoal that makes a good soil enhancement. A promising aspect of this technology is the potential for the use of the biochar to sequester carbon, as it resists degradation in the soil while also enhancing soil fertility. Since up to 50 per cent of the carbon in the original biomass could end up as biochar, the sequestration potential is considerable.



Public Participation & EBR Process

The ministry posted the proposed policy on the Registry on March 27, 2007, and provided the public with 120 days to comment, with the posting closing on July 25, 2007. The decision to proceed was made on August 13, 2008. The ministry received a total of 23 comments. Most of the comments were supportive of the policy in general terms. Many expressed concern that the new allocation processes might not be fair, equitable and inclusive. Many commented that despite the need to nurture a new industry, forest renewal costs must be covered. Two comments indicated that the new policy was too oriented toward economic development and not enough toward environmental sustainability.

ECO Comment

MNR has presented its biofibre policy as if it is a win-only initiative, with little or no downside. The operating assumption is that harvesting additional forest resources under the current management system is without any significant additional environmental costs. The ECO recognizes that, uncertainties regarding long-term sustainability aside, MNR has developed a fairly robust and responsive management system for mitigating the environmental impacts of logging. However, the system is not without environmental cost. It does not eliminate impacts or risk; it mitigates impacts and reduces risk. This raises the question of whether the projected benefits are worth the potential costs.

The main environmental benefit assumed is a reduction in greenhouse gas emissions. The ECO supports the concept of renewable fuels, however, this policy may not provide the climate change benefit advertised, especially in the vital near term. A rigorous scientific assessment of the concept of "climate-

neutral” as it applies to biofibre, as well as other forms of biomass, is required to adequately inform future policy decisions.

The ECO is also concerned with the sustainability of our northern forests. The current planning framework was developed in the absence of a demand for forest biofibre as an energy source; therefore, MNR should consult to develop a set of biomass-harvesting guidelines for Ontario’s forests, to complement and enhance the current set of forest guides. MNR should also expand the current research work to include the effects of biomass removal on soil carbon storage and microbial processes (e.g., mycorrhizal fungi).

Finally, the ECO has concerns with the allocation process for biofibre. The policy does not state the criteria to be used in the decision-making processes and how these will be weighted, nor does it make clear who would make that decision and how the public would have input. This process should be part of, or conducted in association with, the development of a long-term biomass energy strategy for Ontario.

MNR’s resource stewardship principles state: “As our understanding of the way the natural world works and how our actions affect it is often incomplete, MNR staff should exercise caution and special concern for natural values in the face of such uncertainty.” Given the many unknowns that arise from a close examination of the biofibre policy, the ECO feels that the application of this fundamental principle is completely appropriate.

Recommendation 6: The ECO recommends that MNR lead other ministries (including OMAFRA, MEI, MNDMF and MOE) in developing a biofuels strategy that reflects the full ecological implications of making biomass a major component of Ontario’s energy supply mix.

For ministry comments, please see page 164.

4.4 Protected Areas: Nature Must Come First

“A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.”

Aldo Leopold (1949)

The Ontario government balances many different stakeholder interests and priorities in its decision-making. This balancing is evident in the policies and laws that govern activities on Crown land, which makes up the majority of the province’s lands. However, a small part of this Crown land has been set aside for the primary purpose of protection.

The Ministry of Natural Resources (MNR) has been entrusted with the responsibility to manage Ontario’s protected areas. The province has approximately 600 protected areas that cover about nine per cent of Ontario’s area. Society has made the moral, scientific, and political choice to manage these areas for their natural, evolving, pristine or untouched qualities.

The maintenance of ecological integrity is the first priority in guiding all aspects of the planning and management of Ontario’s protected areas. *The Provincial Parks and Conservation Reserves Act, 2006*

makes this purpose very clear, while also directing that the restoration of ecological integrity shall be considered. Ecological integrity is effectively a state in which all the natural components are present and in good working order.

Nature comes first in these sites. They are special places where Ontarians protect and learn about the province's biodiversity. They range from the iconic Algonquin Provincial Park to many smaller areas across the province that may not be as well known. All of them share a common purpose to protect the features and functions of the natural environment.

In this year's Annual Report, the ECO examines how MNR was addressing ecological integrity, ranging from the high-level policy directions for the entire protected area system through to the assessment of individual undertakings in protected areas. The ECO analyzes how MNR incorporated ecological integrity in its decision-making, including how the ministry articulated this priority and ensured accountability in the choices that it makes.

Ecological Integrity and Environmental Assessment in Protected Areas

MNR must comply with the *Environmental Assessment Act (EAA)* for a range of projects in provincial parks and conservation reserves. These undertakings are subject to the ministry's Class Environmental Assessment for Provincial Parks and Conservation Reserves ("parks class EA") that was approved by the Ministry of the Environment (MOE) in September 2004.

The parks class EA predates the *Provincial Parks and Conservation Reserves Act, 2006*. As such, it does not reflect the law's purposes, principles, and objectives. It contains only a single reference to ecological integrity as it applies to one specific protected area. This inconsistency between the parks class EA and the law poses serious problems, which, unless fixed, will be exacerbated in the years to come.

In 2008, members of the public filed an *EBR* application that illustrates the serious disconnect between MNR's parks class EA and the law's stated priority of ecological integrity. The applicants were concerned that the ministry was considering the issuance of a work permit to construct a new snowmobile trail through a conservation reserve without adequately assessing the impact on the ecological integrity of the site. The applicants requested that MNR develop a management plan for this site to replace the existing management statement in order to better consult, plan, and assess options for this protected area.



MNR denied this *EBR* application, and stated that "adequate protection for the environment" already exists in how it chooses to apply the law and its parks class EA. The ministry stated that this project's potential for environmental harm was "nil or negligible" in its screening of this Category B project under its parks class EA. Despite this conclusion, the district biologist at MNR initially recommended refusing the permit application as the proposed trail would be routed through a deer yard, thereby causing significant ecological impacts.

In applying its parks class EA in this case, MNR took the position that its own work permits regulation

would not allow them to deny an application; therefore, the ministry was obligated to issue a permit and allow the construction of a snowmobile trail through a protected area. In taking this position, MNR essentially predetermined and nullified the essential process of its class environmental assessment.

It is disconcerting how the ministry interpreted and applied its own regulatory framework in this case. In denying this *EBR* application, MNR failed to address its central point: the ministry's management of this protected area inadequately addressed the maintenance of ecological integrity. The option to deny a proposed project, particularly when it runs counter to the legal purpose of a protected area, should always be an alternative that is seriously considered.

The screening of a project in such a manner does not meet any reasonable interpretation of a planning process that makes ecological integrity its first priority. MOE shared a similar concern in issuing an Order under the *EAA* to MNR on this specific issue, requiring that the ministry assess the project's impacts on the ecological integrity of this protected area. Likely as a result of MOE's intervention, MNR chose not to proceed with this project. This type of scenario is likely to repeat itself until MNR makes ecological integrity the priority in how it operates.

This case revealed that a significant problem exists with the work permits regulation under the *Provincial Parks and Conservation Reserves Act, 2006*. MNR field staff interpreted O. Reg. 345/07 (Work Permits) as giving the ministry limited discretion to refuse to issue work permits; the onus fell on MNR staff to rationalize why a proposed activity was inappropriate. However, subsequent to this incident, MNR corporately took the position that it does indeed have the discretion to refuse to issue such permits. Any regulations or other decision-making processes affecting protected areas should be designed to assume that only approvals that have demonstrated their compatibility with the maintenance of ecological integrity are allowed. The burden of proof should be on why a proposed activity may be appropriate, rather than on having to justify why it is not.

"It is disconcerting how the ministry interpreted and applied its own regulatory framework in this case. In denying this *EBR* application, MNR failed to address its central point: the ministry's management of this protected area inadequately addressed the maintenance of ecological integrity."

There is some question as to whether MNR uses the flexibility provided in the parks class EA appropriately. The EA process assigns projects to one of four categories based on their potential for negative environmental effects and public concern. These categories then stipulate what steps MNR must undertake for a project, ranging from the approval to proceed without further evaluation or consultation (Category A) to an individual environmental assessment (Category D). While many types of projects are pre-assigned a category, the ministry has broad discretion to categorize a project as it sees fit. The lower the assigned category (if Category A is considered the lowest level of assessment and Category D the highest), the less assessment and consultation is necessary. In simpler terms, it involves less paperwork and less time, as well as less of a chance of adverse public reaction because notice of the project is not as widespread.

MNR does not track or count Category A projects undertaken in Ontario's provincial parks and conservation reserves. Beyond this lowest category, the ministry has chosen to make every other undertaking a

Category B project since 2004 with only one exception. It is only once a project has been rated as a Category C that a more detailed environmental study report (ESR) and wider consultation is required.

For example, since 2004, culling cormorants and deer in protected areas have been handled as Category B undertakings. Such projects are profound decisions to make. They may be beneficial to the maintenance and restoration of the ecological integrity. However, such projects still should be viewed as being of high public concern meriting more thorough consultation, as well as requiring detailed environmental study reports to explain the impacts and alternatives.

In several other cases, MNR chose to categorize deregulating parts of several protected areas as Category B projects without the benefit of widespread consultation and a thorough assessment. These projects included deregulating part of a park to accommodate a new sewage lagoon for a commercial facility outside the park, and deregulating part of a park to construct an access road into an adjacent residential subdivision. Deregulating even a small part of a protected area is not a decision that should be weighed lightly. It should be treated as an issue of high public concern, as these areas have been set aside on behalf of Ontarians for the greater purpose of protecting the environment.

Ecological Integrity and the Planning Framework for Protected Areas

In 2008, members of the public filed another *EBR* application requesting that the *Provincial Parks and Conservation Reserves Act, 2006* be amended. The applicants were concerned that the current wording of the law does not ensure that the maintenance of ecological integrity is adequately reflected in the required management direction for each protected area and how these directions are then implemented by MNR.

MNR denied this *EBR* application, stating that the applicants did not present any evidence that was not already considered during the public consultation process to develop the *Provincial Parks and Conservation Reserves Act, 2006*. Moreover, the ministry stated that no evidence was presented by the applicants to suggest that a failure to undertake the review could result in significant harm to the environment.

The ministry's response failed to address any of the main issues raised by the applicants. The applicants raised valid concerns about the ambiguity in the Act with respect to how MNR should develop and apply management direction for protected areas. In effect, they were asking that plans properly reflect the law and that the government follow its own plans.

In the past, numerous experts raised similar criticisms of the old *Provincial Parks Act*. While the new *Provincial Parks and Conservation Reserves Act, 2006* remedied some long-standing planning deficiencies, such as making the preparation of management direction mandatory, it does not address how management plans or statements must be adhered to by MNR.

The Ontario government has established other planning regimes that explicitly direct that ministers, ministry officials, and other decision-makers exercise their authority consistent with approved plans. For example, the *Planning Act*, which regulates municipal land use planning, requires that a decision made by a minister of the Crown "shall be



consistent with" any policy statements issued under that law; they also shall conform with provincial plans or shall not conflict with them, as the case may be. These particular policies and plans are intended to reflect and apply provincial interests as described by the government, very much like what the *Provincial Parks and Conservation Reserves Act, 2006* intends for protected areas.

Weakening Accountability:

The Shift to Class Environmental Assessments over the *EBR*

The *EBR* requires that plans for protected areas be posted on the Environmental Registry as policy proposal notices, followed at a later date with a decision notice. These requirements ensure: the general public receives notice of the proposed policy and has the opportunity to submit comments; the ministry consider the public comments, and the ministry must consider its Statement of Environmental Values (SEV) in reaching a final decision. This system also provides accountability as these policies are subject to the scrutiny of the ECO who impartially reports to the Ontario Legislature and the public on the merits of initiatives. When MNR does use the Environmental Registry for these types of policies, it maintains a high level of public consultation that the ECO has previously commended.

MNR also develops more detailed policies for protected areas, beyond management direction, that focus on a specific issue. Over the years, these kinds of policies have been referred to as implementation plans, resource management plans, stewardship plans, and vegetation or wildlife management plans. Under whatever name, plans are policies for the purposes of the *EBR*. These policies provide much more detail and direction on a specific set of issues than would be appropriate in a management plan or statement.

When the ministry seeks to implement a project that is described in these policies, the parks class EA applies. In this fashion, both the policy and the project are respectively subject to the *EBR* and *EAA* at different steps in the process.

Until recently, MNR adhered to the *EBR* by posting such implementation plans on the Environmental Registry for proper public consultation. This was also consistent with the parks class EA, which explicitly excludes coverage of implementation plans. However, in 2008, MNR began to treat all such detailed plans as projects under its parks class EA, rather than as policies subject to the *EBR*. The consequence of this action is that the general public will be denied many of its rights under the *EBR*.

For example, MNR currently has three different implementation plans for Presqu'île Provincial Park. These three policies are to provide detailed direction for the management of the beach and dunes, the park mainland, and High Bluff and Gull Islands. MNR treated the first implementation plan as subject to the *EBR*, and the latter two as not and exclusively covered under the parks class EA. As a consequence, many of the public's rights were denied for the latter two plans. For example, only local residents and some specific stakeholders received notice and had the opportunity to comment on the latter two plans.

MNR is now bundling multiple projects through a single use of its parks class EA. The ministry has never taken this approach in the past, although its 2009 draft Ontario Protected Areas Planning Manual now expressly encourages it. For example, the implementation plan for Presqu'île Provincial Park's mainland area includes four category B projects that are to continue until the year 2019: managing vegetation; managing deer by using an annual cull; controlling invasive and nuisance species; and, controlling erosion. This implementation plan also contains many other planning issues without making any connection to being

part of the parks class EA. MNR's new draft planning manual states that this bundling of issues has the benefit of "shorter timelines, lower process costs, quick response, [and the] need for approval in the short term to meet priority government objectives."

ECO Comment

The public expects the Ontario government to act as the steward of our protected areas, putting nature first in protecting these natural treasures. Fortunately, ecological integrity is the first priority by law for Ontario's protected areas. However, on its own, this legal statement is insufficient for the task at hand. Two fundamental barriers are evident: aligning MNR's corporate culture and the government's policies with this vision.

MNR should operationally treat conserving biodiversity as the single unifying concept for the ministry, especially within the Ontario Parks branch as ecological integrity is synonymous with this concept. A serious disconnect exists when MNR staff are frequently directed to seek "balance" in managing issues when the law sets out a clear priority for protected areas. Ecological integrity should be the primary criterion to be used in all decisions that affect protected areas.

The *Provincial Parks and Conservation Reserves Act, 2006* requires that MNR prepare a new planning manual for protected areas by September 2009. This detailed policy will outline how management direction for provincial parks and conservation reserves will be developed. It is imperative that MNR embed the core principles and objectives of the *Provincial Parks and Conservation Reserves Act, 2006* in this manual. The ECO believes that the new planning manual should guide how the ecological integrity of Ontario's protected areas is maintained and restored as necessary. Substantial changes should also be made to MNR's parks class EA to reflect that ecological integrity is now the priority.

Recommendation 7: The ECO recommends that MNR ensure that the first priority of the *Provincial Parks and Conservation Reserves Act, 2006* – ecological integrity – is also clearly reflected and prioritized in all policies, manuals and guidance documents that influence the planning and management of Ontario's protected areas.

MNR anticipates releasing its State of Ontario's Protected Areas Report in 2009. The law directs that it will include a broad assessment of the extent to which the objectives of protected areas are being achieved, the degree of ecological representation, and known ecological threats, as well as the socio-economic benefits. It is extremely important that this report provide a frank assessment of the state of protected areas. An objective of the report should be to enable the ministry to focus its resources on key systemic issues, be they common threats to ecological integrity or the need to expand government policy to adequately address a developing issue.

Barriers to Protecting Ecological Integrity: The Wolf Lake Area

In 1990, MNR commissioned a life science resource assessment of five areas in Ontario, including the Wolf Lake area, which lies approximately 50 kilometres northeast of Sudbury. The report concluded that "the Wolf Lake site is unique, in relation to the other five areas assessed, given its contiguous stands of mature red pine, its fire history, and its viewsapes." MNR states that this area "may be the largest

remaining contiguous old growth red pine dominated forest in North America." Old growth forests help maintain biodiversity, provide critical habitat, and maintain important ecological processes.

In 1999, Ontario's Living Legacy (OLL) Land Use Strategy recommended the establishment of Chiniguchi Provincial Park in the Wolf Lake area. It was later determined that Chiniguchi Provincial Park overlapped with mining claims. Lands within this proposed park that overlapped with existing mining lands were subsequently designated as three forest reserves, one of which is Wolf Lake Old Growth Forest Reserve (2,386 hectares). Under this designation, new mineral exploration and mining are allowed, while commercial timber harvesting and new hydroelectric power development are not.

Shortly after the Wolf Lake Old Growth Forest Reserve was created in 1999, a large portion of the claims within the reserve lapsed and these lands (totalling 1,773 hectares) were withdrawn and regulated as part of Chiniguchi Provincial Park. However, some active mining claims and leases still exist today within the original proposed park boundaries.

In 2002, MNDM and MNR committed to considering options for mining lands within OLL forest reserves. This process is known as "mining disentanglement." In May 2005, MNR proposed removing the forest reserve designation of Wolf Lake Old Growth Forest Reserve, re-designating the area to a general use area or enhanced management area, and seeking replacement areas.

In January 2008, members of the public filed an *EBR* application that requested that MNR regulate the Wolf Lake Old Growth Forest Reserve as a protected area or find a comparable contiguous area of red pine old growth in the immediate area. They stated that the site's "international significance as the largest contiguous red pine old growth – arguably in the world – dictates that the province must do everything in its power to remove the threat of mining activity from it and regulate it as a protected area."

MNR denied this *EBR* application, stating that it already plans to seek potential replacement lands for protection. The ministry also stated that it recognizes the old growth value of the site and will instil appropriate conservation measures irrespective of the land use designation given. MNDM also denied this *EBR* application, stating that the applicants' request falls outside the ministry's mandate.



Neither MNR nor MNDM gave any reason why the forest reserve lands cannot be withdrawn and regulated as part of Chiniguchi Provincial Park if the mining claims lapse and leases expire. Rather, the ministries only stated that "[t]he government, led by MNR, continues to look for solutions to minimize potential land use conflicts, and considers existing established land uses when examining candidate protected areas." In March 2009, MNDM informed the ECO that there are no provisions under the *Mining Act* to rescind an existing mining lease that is in good standing.

ECO Comment

The ECO believes that the government's failure to protect the Wolf Lake area, as it committed to in the 1990s, illustrates a serious policy flaw. The government should have the ability to rectify a mistake that has clear ecological consequences. MNR and MNDM should be capable of protecting an area that contains one

of the largest, if not the largest, known contiguous red pine old growth forest in North America. The ECO believes that MNDM should offer reasonable settlement to individuals holding conflicting claims or leases so that the lands can be withdrawn and regulated as protected areas.

For a more detailed review of this application, see Section 5.4.2 of the Supplement to this Annual Report.

Recommendation 8: The ECO recommends that MNR and MNDM develop regulatory mechanisms and policies to allow lands to be protected in cases where environmentally significant sites and mining claims conflict.

For ministry comments, please see page 164.

4.5 Soil: Our Eroding Asset

The Vital Importance of Soil

When we think of resources, we typically think of our aquifers, lakes and rivers, our forest resources, our oil, gas and mineral reserves, and our terrestrial and aquatic plant communities. We don't usually think of soil as a resource. Yet we rely on soil to produce our food, degrade our solid wastes, clean our water, and provide dependable habitat for the countless microbes (at least 10,000 species per gram of soil) that provide these vital ecological functions. Soil is the rich, diverse, and dynamic matrix within which terrestrial life functions.

Cropland soils are vital to our economy. In 2006, Ontario's approximately 3.7 million hectares of cropland produced \$8.8 billion in farm receipts. The Ontario farm and food processing sector generates over \$30 billion in sales annually – representing more than 35 per cent of Canada's agri-food sector GDP. Our agricultural exploitation of the soil resource has also become much more efficient over time; for example, the average seed-corn yield has doubled from about 3.5 tonnes per hectare 30 years ago to about 7.0 tonnes per hectare at present. Similar increases have been achieved with other important crops, such as soybeans.

Much of this increase in productivity is a direct result of fossil fuel based inputs, such as inorganic fertilizers, pesticides and mechanization, combined with agronomic advances in plant hybridization and genetics. More recently, however, the sustainability of this approach has been called into question. Should we not be asking whether this high level of productivity and the methods used to achieve it could be affecting the quality and quantity of available fertile soil? The ECO believes that it is time to take a close look at the status of Ontario soils and to consider whether we are managing them in a sustainable way.

Soil and Organic Matter

Soil consists of a mixture of organic and mineral particulate matter of various sizes and proportions. In the topsoil layer, the mineral portion contains sand, silt and clay, and the relative amounts of each of these

determine the soil's characteristic texture. Clay is the finest portion and provides for the water-holding capacity, while the larger particles of sand and silt provide pore spaces that keep the soil aerated and drained. Soils form slowly from parent material (rock) that has disintegrated through abrasion, chemical and physical processes and biological activity.

Overall, the amount of soil organic matter (SOM) ranges from one to ten per cent of the total dry weight of soil. The organic components of SOM include: raw plant residues (less than 10 per cent); a humus portion fairly resistant to further biological breakdown (40 to 60 per cent); and biologically "active" organic material (10 to 40 per cent). The active fraction – where microorganisms, particularly bacteria and fungi, break down the complex organic matter and recycle its nutrients – is a particularly important component of fertile soil. The microbes and other microfauna create what scientists call a "food web" – a biological matrix that improves soil structure, increases both water retention and infiltration, provides a slow-release nutrient supply appropriate for plant requirements, reduces nutrient loss through leaching, and increases system resilience to external impacts.

This biological matrix depends on organic matter to provide food for the organisms. If the food web is diminished due to the loss of organic matter, the soil becomes more liable to compaction and much more prone to erosion. The loss of water-holding and infiltration capacity makes crops more susceptible to

short-term drought effects. A reduction in beneficial microbe populations or diversity reduces the soil's overall productivity and necessitates greater dependence on potentially costly external inputs of fertilizer to the cropping system.

SOM declines when land is first cleared and put into agricultural use, with most of the loss occurring within the first ten years. Information on SOM levels and long-term trends in Ontario soils is extremely limited. One study, in the mid-1990s, found that for 16 study sites ranging across Ontario, deforestation and cultivation over the decades had released about 34 per cent of the soil carbon in the top 250 mm to 350 mm of soil.



The Problem of Soil Erosion

The substantial carbon losses described above greatly increase our croplands' susceptibility to erosion. The most common agents of erosion are tillage, wind and water. Erosion caused by tillage on steep slopes is primarily a localized concern. Wind erosion may become a concern if climate change increases the frequency of droughts, but has not been a major problem to date because of Ontario's humid climate. Water erosion, on the other hand, is widespread, sometimes highly destructive and, therefore, the major environmental concern.

How serious a problem is soil erosion in Ontario? To answer this big question, we need to know:

- 1 How much topsoil is Ontario losing on an annual basis?
- 2 What is the annual replacement rate for topsoil?
- 3 In what direction is the trend moving? Are our efforts at soil conservation improving or failing?

Complete answers to these three questions are not available – a problem in itself – although there are some disturbing partial answers.

With regard to annual topsoil loss, estimates based on actual sampling and measurement are sparse to non-existent. However, Agriculture and Agri-Food Canada (AAFC) has compiled a comprehensive series of reports on "Agri-Environmental Indicators," which use Census of Agriculture data and Soil Landscape of Canada maps to assess the risk of various rates of soil erosion for all provinces. These risk estimates are based on data regarding physical factors, such as slope, slope length and lack of cover, and fineness of the soil. They do not consider the level of organic matter. Table 1 summarizes the most recent estimates of water erosion risk in Ontario.

Table 1: Cropland Water Erosion Risk in Ontario 2001

Erosion Risk Category	Annual Soil Loss Rate (tonnes/hectare)	Percentage of Soils in Risk Class (2001)
Very low	< 6	56
Low	6 – 11	15
Moderate	11 – 22	16
High	22 – 33	7
Very High	> 33	6

From: Agri-Environmental Indicator Report Series, Report No. 2 (AAFC)

According to this analysis, as of 2001, 44 per cent of our land had the potential to erode at rates greater than six tonnes per hectare per year. To put this into perspective, for almost half of our cropland, we are at risk of losing *at least* one tonne of soil for every tonne of grain corn produced. For up to 29 per cent of our arable land, the potential loss rate is at least twice that.

If the above represents our annual risk of soil loss, what would be a reasonable estimate of the replacement rate? Soil regeneration rates have been reported in the range of 0.5 to 1.1 tonnes per hectare per year. This is considerably lower than the six-tonne-per-annum level set by AAFC as "low risk," meaning that even our low-risk croplands may be losing their topsoil at a rate well above that of natural replacement. We cannot say at what rate this is actually happening, because we do not have the data, but we can say that the risk of this type of unsustainable loss is very high for a very large proportion of our croplands.

From a policy perspective, both the Canadian and Ontario governments have defined "tolerable" (T) soil loss not in terms of soil replacement, but rather in terms of sustained crop productivity. This is because, in practice, soil loss risk could not be kept within soil replacement rate levels for row crops, such as corn and soybeans, unless very conservative practices or multi-year crop rotations with forage crops were implemented. The value for T has usually been set by determining soil loss rates below which crop yields have been noticed to decline. For instance, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) uses a T value of 6.6 tonnes per hectare per year, while AAFC uses a T value of 7.0 tonnes per hectare per year.

Unfortunately, the concept of "tolerable" seems to have replaced the concept of "sustainable" in our soil management policy. Perhaps this is because the loss of quality topsoil can be an insidiously gradual

process. It is masked by the use of inorganic fertilizers – at least until dire symptoms, such as noticeable erosion damage or marked declines in major crop yields, “suddenly” appear. According to OMAFRA, this lack of awareness of soil loss occurs because “continuous advances in soil management and crop production technology ... have maintained or increased yields *in spite of soil erosion*” (emphasis added). By ignoring the continuous loss of the natural soil resource, farmers are becoming locked into an expensive dependence on inorganic fertilizer that threatens the resilience and sustainability of our agricultural system.

The risk of soil erosion can be reduced through certain management practices, such as cover cropping and conservative tillage technologies. In terms of cover cropping, perennial covers of hay and pasture give a high degree of protection to the soil, as compared to widely spaced row crops such as corn, which provide very minimal soil protection. Other uses of cover crops include: protecting bare soil between harvest and next planting; covering the bare soil between rows of conventionally grown crops; and renewing the soil’s nutrient supply during fallow periods (e.g., green manures).

Conservation tillage practices that substantially reduce water (and tillage) erosion include: “no-till,” where seeds are drilled directly into the soil; “chisel ploughing,” where the main function is to loosen and aerate the soils without turning, while leaving crop residue at the top of the soil; and “disk harrowing,” where the soil’s surface layers are disked (cut) but not turned. The traditional mouldboard ploughing and associated secondary tillage, on the other hand, set up conditions that are conducive to water and tillage erosion, and to accelerating the loss of organic matter.

Soil Management Policy in Ontario

The above analysis certainly indicates that soil erosion is a serious concern in Ontario. Is the trend for the better, or for the worse? A short history of soil management policy in Ontario is illustrative in this regard. Serious problems with soil degradation in Ontario began occurring in the early 1960s. More sustainable practices, such as mixed livestock-cropping systems, high proportions of forage and cereal grain production, and multi-year crop rotations, had begun to be replaced by intensified crop production, crop specialization, the separation of livestock operations from crop production, and off-farm inputs of fertilizers. It is particularly worthy of note that early soil conservation planning services for farmers, offered as extension services from the Ontario Agricultural College from 1945 until about 1958, were phased out due to growing interest in commercial fertilizers as a substitute for plant nutrients lost because of soil erosion.

In 1978, a report by the Pollution from Land Use Activities Reference Group (PLUARG) showed the scale of erosion, sediment and nutrient runoff from land uses in the Great Lakes Basin and raised awareness in the agricultural community to begin to address these issues. It was not until the 1980s, however, that programs began to appear to assist farmers in addressing environmental issues and implement conservation practices. Several major programs were initiated over the period from 1983 to 1995, which brought some change to Ontario’s agricultural practices and resulted in some improvements. (Readers are referred to Section 7 in the Supplement to this Annual Report for a description and history of these programs.) Reductions in erosion risk by 2001 are evident in Table 2, comparing soil erosion risk category distribution for that year with 1981.

Table 2: Cropland Water Erosion Risk in Ontario, 1981 to 2001.

Erosion Risk Category	Annual Soil Loss Rate (tonnes/hectare)	1981	2001
Very low	< 6	44	56
Low	6 – 11	22	15
Moderate	11 – 22	15	16
High	22 – 33	11	7
Very High	> 33	8	6

From: Agri-Environmental Indicator Report Series, Report No. 2 (AAFC)

Despite the modest improvements shown above, Ontario still had, as of 2001, one of the lowest proportions (56 per cent) of land in the very low risk class and the largest share (six per cent) of cropland in the very high risk class, compared with other provinces. The reader should bear in mind, furthermore, that the risk levels used in the above assessment are based on the concept of tolerable, rather than sustainable, soil loss.

The programs of the mid-1980s to mid-1990s expended over \$100 million, and at their peak, 25-30 full-time OMAFRA staff were working on soil conservation programs directly with landowners, Conservation Authorities and farm organizations. As OMAFRA's priorities began to shift, these staff were subsequently re-deployed and OMAFRA began to rely on farm organizations, such as the Ontario Soil and Crop Improvement Association (OSCIA), along with Conservation Authorities, to deliver cost-share programs to farmers, while the ministry focused on providing training to farm groups.

Canada's Green Plan of the early 1990s introduced a pilot program to develop Environmental Farm Plans (EFPs), which were initiated, with OMAFRA technical support, in 1993. Environmental Farm Planning is a voluntary, confidential process used by farmers to identify environmental risks on their farm and to develop strategies to mitigate them. In the currently available federal-provincial funding for farm stewardship and conservation measures, EFPs are required before landowners qualify to receive cost-sharing dollars.

Most program initiatives to conserve soil now fall under federal-provincial agreements under the aegis of the Agricultural Policy Framework (APF). We do not yet know whether or not the more recent programs have continued the slight improvement trend that was started in the early 1990s. In 2008, the federal Commissioner of the Environment and Sustainable Development (CESD) audited the Environment Section of the Agricultural Policy Framework, to examine whether its objectives for environmentally sustainable agriculture were being achieved and to assess its ability to report on performance under this section. Among other concerns, the report identified a lack of monitoring data necessary to track the effectiveness of the programs.

ECO Comment

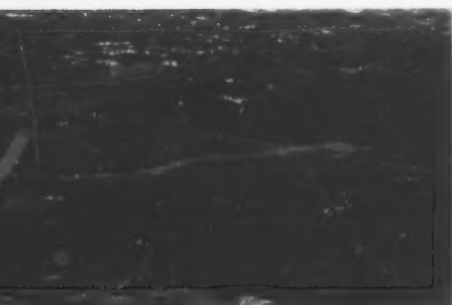
While some progress has been made since the 1980s, we still have a situation where a predominant portion of our agricultural soils are being managed in a way that is clearly not sustainable. We do not know

how much of our soil is being lost each year at unsustainable rates, but the information that we do have suggests that almost half our cropland is at risk of losing topsoil at a rate that is much greater than its replacement rate. Moreover, we have no guarantee of sustainable soil loss rates on any of our croplands. Reports within the last ten years indicate that agricultural soil conservation practices have been adopted over a relatively small percentage of the province's croplands. No-till practices have increased substantially in the last 20 years, yet the percentage of overall cropped land under no-till remains less than 20 per cent.

Meanwhile, climate change appears to be changing Ontario's weather patterns, increasing the likelihood of more intensive runoff events. One recent report has warned that more frequently occurring spring rain events, coming at a time when soil is left unprotected by crops, could potentially increase erosion rates by *one or more orders of magnitude*. Economic shifts are also coming into play. Agricultural operations continue to increase in size and specialization, and there is rising interest in production of grain for ethanol and soybeans for biofuel, and in the use of crops and crop by-products as alternative fuels for electrical generation. These trends may increase the amount of high-risk cropland brought into use at the same time as they create a demand for agricultural "wastes" that could substantially reduce the amount of organic matter returned to the soil.

We can only suspect the dimensions of the overall soil problem. We do not have enough information about actual soil erosion rates to be able to do a proper assessment, nor is there sufficient information upon which to evaluate the effectiveness of the most recent cost-sharing programs that have been available under the Agricultural Policy Framework.

Similarly, the monitoring of sediment loss from watersheds is insufficient to enable us to identify trends in soil loss related to changing practices or climate change and thus to prioritize watershed areas of concern. The last substantive effort, carried out under PLUARG in 1978, estimated the average annual transport of sediment via tributaries to the Canadian portion of the Great Lakes at 1,084,000 tonnes. We have no recent data to determine whether this situation has changed and, if so, by how much.



Finally, given its importance to soil health, it seems inconceivable that we know virtually nothing about our soil organic matter and how it is changing. This is information that could be of great value not only in saving and enriching Ontario's soil, but in developing strategies for sequestering carbon to offset greenhouse gas emissions. We must find ways of overcoming the economic barriers to re-incorporating organic "wastes" back into agricultural soil.

The ECO encourages OMAFRA to set an aggressive soil conservation agenda for its part in the new federal-provincial programs, and to undertake comprehensive soil mapping review, soil erosion assessment

and monitoring to support the evaluation of program effectiveness. The ECO also believes that successful programs, past and present, deserve to be re-assessed, and to have their best elements considered for re-institution. Historic cutbacks in staff who implemented technology transfer and extension programs also need to be reviewed. While farm organizations, such as the Ontario Federation of Agriculture (OFA) and OSCIA, are doing a good job of delivering programs, OMAFRA staff is needed to represent provincial interests in their interaction with these groups and directly with farmers. Experience has shown that the areas of the province that have the highest adoption rates of conservation practices are those that have benefited from the work of highly qualified field personnel and aggressive promotion of scientifically and economically based initiatives.

Finally, the ECO suggests that OMAFRA consider replacing the concept of "tolerable soil loss" (which does not represent a sustainable level) with "net soil loss" (i.e., soil lost to erosion less natural and engineered replacement) and subsequently develop a long-term strategy to bring Ontario's net soil loss down to zero. This could be done in conjunction with initiatives to sequester carbon as part of a joint soil conservation/climate change mitigation strategy.

Ecologist C.S. Holling defined resilience as "the ability of a system to maintain its structure and patterns of behaviour in the face of disturbance." In the case of our croplands, resilience implies not only an ability to maintain productivity (i.e., in commercial terms, to produce a crop) in the face of climatic stresses, such as drought, heavy rainfall and other extreme events, but also an ability to maintain and renew itself on a sustainable basis. At a time when climate change and economic shifts are presenting significant new challenges to the agricultural community, we need to be assured that Ontario's soils are in good standing.

Recommendation 9: The ECO recommends that OMAFRA commit to systematically monitoring, documenting and reporting on farm soil erosion risk levels, net annual soil loss rates and trends in soil organic matter.

Recommendation 10: The ECO recommends that OMAFRA establish an aggressive soil conservation agenda, including a long-term strategy to bring Ontario's net soil loss down to zero.

"Peak Soil" and Food Security

Globally, the amount of cropland has steadily increased since humanity first began to cultivate the soil to produce food. This has always been a net increase, however, not an absolute one: agricultural land is lost each year to soil degradation, wind and water erosion and conversion of cropland to other uses, such as industry and housing. Until recently these losses have always been more than offset by gains from land being newly put into agricultural use. However, at some point in the mid-1980s, for the first time the global rate of loss of agricultural land began to exceed the amount of land newly cultivated.

In conjunction with this "peaking" of available food-producing land, other factors have come into play, resulting in signs of escalating worldwide problems with food supply. Climate change effects, recent shifts in the use of cropland to production of bio-fuel sources, high energy costs, the growing population, and the limiting of world food-producing land all came together in 2008, resulting in soaring food prices. Global "food security" moved to the front of the political agenda, and international conferences were convened to attempt to develop strategies. The global economic downturn that began in Canada in late 2008 has pushed the food crisis into the background of media coverage; however, it is in itself a prominent facet of the world economic crisis and will continue to loom large even after economic recovery occurs in the business cycle.

Ontario is not isolated from world food supply issues. This province lost some 243,000 hectares of farmland in the ten years from 1996 to 2006. We imported \$16.6 billion worth of food products in 2008, compared with our food exports of \$9.3 billion. All the aforementioned factors of climate change and economics are at play in Ontario. It is therefore incumbent upon the provincial government to take all possible measures to ensure that our soil use is sustainable and that our soil management practices underpin an agricultural system that is resilient in the face of these changes.

For ministry comments, please see page 165

4.6 The Pesticide Ban

On April 22, 2009 – Earth Day – Ontario’s ban on the sale and use of pesticides for cosmetic purposes took effect. Unlike municipal pesticide by-laws, the provincial ban not only restricts the use of certain pesticides and pesticide ingredients, but also their sale. The province-wide ban is intended to create “one clear, transparent and understandable set of rules across the province.”

Under the ban, certain pesticides may no longer be used to control insects, weeds and fungal diseases on private or public property. However, they may continue to be used “in and around the home” to protect health and safety.

Ontario’s Minister of the Environment stated: “I’m proud to say that, when the ban takes effect on Earth Day, we will have eliminated this unnecessary risk to our environment, our families, and especially our children.” However, the ban – heralded as “one of the toughest in the world” – is not without controversy, as evidenced by the thousands of supporters and opponents that commented on the proposed legislation.

Why are Pesticides a Concern?

Pesticides are designed to kill or control harmful or unwanted living organisms. They can take the form of chemical substances, biological control organisms, or other forms. Pesticides serve important functions, including: improving quality and yield in agricultural production; preventing and controlling insect infestations; controlling the spread of harmful diseases and toxins; controlling noxious plants, and protecting pets from fleas and ticks.

There are risks, too. Even when applied properly, pesticides and their breakdown products can contaminate soil, water and air, harming non-targeted flora and fauna. Some pesticides can persist in the environment long after being applied, and can accumulate in the body tissues of wildlife, becoming more concentrated up the food chain.

Pesticides Linked to Pollinator Decline

Pollinators – birds, bats and insects that aid in the fertilization of flowering plants by transporting pollen – play a vastly important role in the environment. It has been estimated that three-quarters of the world’s flowering plant species depend on pollinators. With a significant percentage of humanity’s food supply dependent on pollinators, and nearly 100 kinds of food crops worldwide requiring pollination by honeybees alone, the importance of pollinators for global agricultural production is clear.

Pesticides are considered to be one of the main threats to pollinators, along with disease, habitat loss and degradation, monoculture (which is often supported using pesticides) and the introduction of exotic species.

Recent widespread declines in pollinator populations around the world have been cause for significant concern and debate. Most notable is the mass die-off of commercial colonies of the European honeybee (*Apis mellifera*) that first occurred around 2006 and has affected colonies in the U.S., Canada, Australia, Brazil, China, Europe and other regions. This mysterious phenomenon has come to be known as Colony Collapse Disorder (CCD). Many theories on the cause have been advanced, including the use of a relatively new class of crop pesticides called neonicotinoids. Current thinking is that the cause may be a combination of factors (including pesticide use) that, together, weakens colonies and makes them more susceptible to disease.

This widespread population decline is not limited to commercial honeybees; considerable declines have also been observed in wild populations of other pollinators, including wild bees, bats and hummingbirds. In Canada, the rusty-patched bumblebee, once a common species in southern Ontario, has not been seen for several years.

Whether pesticides have caused or contributed to the most recent pollinator declines or not, there can be no doubt that reducing the volume of pesticides in the environment would be beneficial to pollinators. Not only would this reduce the potential threats posed by pesticide chemicals, but pollinators thrive in an environment that includes a variety of food sources; green, weed-free lawns have been likened to "deserts" for bees.

By ending our preoccupation with perfect lawns, and instead planting more hardy native species, allowing wildflowers and other "weeds" to grow along roadsides and in parks, we could reduce our reliance on pesticides while, at the same time, encouraging more resilient and diverse pollinator communities.

Description

The Cosmetic Pesticides Ban Act

Bill 64, the *Cosmetic Pesticides Ban Act*, received Royal Assent on June 18, 2008. Bill 64 amended Ontario's *Pesticides Act* to prohibit the use "in, on or over land" of certain pesticides that may be used for cosmetic purposes. "Cosmetic" is defined as "non-essential." The sale of certain pesticides is also prohibited. Further, municipal cosmetic pesticide by-laws are now rendered inoperative.

There are a number of exceptions to the prohibition on use, including agriculture, forestry and promotion of public health and safety. Golf courses and "other prescribed uses" are conditionally exempt. MOE stated that it will "focus its initial [enforcement] efforts on education when responding to reports of suspected non-compliance."

Pesticides Regulation O. Reg. 63/09

A new general regulation made under the *Pesticides Act*, O. Reg. 63/09, came into force with the *Cosmetic Pesticides Ban Act* on April 22, 2009, to give the ban full effect.

Pesticide Classification

The new regulation created several new classes of pesticides. In particular:

- Class 7 includes dual-use (i.e., cosmetic and non-cosmetic) pesticides whose use is banned for cosmetic purposes;
- Class 8 pesticides are cosmetic pesticides that are banned from sale; and
- Class 9 includes pesticide ingredients that are banned for cosmetic use.

Pesticides are to be classified in accordance with criteria set out in the regulation. The new Pesticide Classification Guideline for Ontario, released in conjunction with the filing of the regulation, explains the pesticide classification system in more detail. The MOE Director continues to be responsible for making the final decision about classifying pesticides, and has some discretion in exercising that duty.

Exemptions from the Prohibition on Use

The new regulation defines "agriculture," "forestry," "golf courses" and "promotion of public health and safety" for purposes of the exemptions in the *Pesticides Act*. The regulation also sets out conditions required for golf courses to be exempt, and to engage the health or safety exemption for poisonous plants, the protection of buildings and structures, and public works.

Other exemptions not listed in the *Pesticides Act* are prescribed under O. Reg. 63/09, including:

- specialty turf,
- arboriculture,
- sports fields (for national or international sporting events only),
- structural exterminations,
- scientific purposes,
- compliance with other legislation, and
- natural resources

Requirements for Sale

O. Reg. 63/09 sets new restrictions on the sale of cosmetic pesticides. Purchasers of Class 7 pesticides must receive ministry-approved information about restrictions on cosmetic use. The regulation also requires vendors of Class 7 pesticides, effective April 22, 2011, to restrict public access to those pesticides by restricting their display.

Notice Signs

The regulation sets out signage requirements to alert the public when certain pesticides are in use. When a licensed professional uses lower-risk pesticides or biopesticides (i.e., Class 11), a green-coloured sign must be used.

Other Changes

Pesticide storage and fire department notification requirements now apply not only to operators and vendors, but to pesticide manufacturers as well. These changes were made in response to a July 2007 fire at a pesticide packaging facility in Dundas, Ontario. In this reporting year, the ECO received numerous applications related to that fire; for more information, see section 5 of the Supplement to this Annual Report.

EBR Classification

On April 22, 2009, MOE filed a regulation amending O. Reg. 681/94 (Classification of Proposals for Instruments), made under the *Environmental Bill of Rights, 1993* (EBR). The amendments revoke the previous list of *Pesticides Act* instruments prescribed under the EBR, and replace them with instruments under O. Reg. 63/09. MOE did not post a proposal notice on the Environmental Registry or consult the public on this regulation.

Implications of the Decision

The Ontario government's decision to prohibit the non-essential use of pesticides will undoubtedly reduce the use and release of pesticides. Prohibiting sales will help to ensure that certain pesticides are kept out of use. However, the numerous exceptions mean that banned pesticides will continue to be used – and deposited in the environment – in many situations.

Over time, reducing pesticide use should increase ecosystem resilience, promote the resurgence of natural controls on pests, and result in a landscape with greater biodiversity, creating habitat and food sources for many species.

The corollary is that the pesticide ban will likely result, at least at first, in more weeds and pests in lawns and gardens on both private and public property. However, an increase in the availability and use of greener alternatives should, with time, help mitigate the situation. Indeed, the Ontario government hopes that the cosmetic pesticide ban "is going to drive new green products in the economy," and will invest \$480,000 to "encourage the development of lower-risk pesticides and other green alternatives." In the short-term, however, the ban may have significant effects on the economic health or continued viability of many lawn care businesses, effectively sunsetting components of an industry.

While the government provided ample warning that the law would take effect in spring 2009, the full details of the ban were not confirmed until O. Reg. 63/09 was filed on March 3, 2009. In particular, the lists of pesticides in some classes changed significantly from those originally proposed in November 2008. This short transition period meant that manufacturers, distributors and retailers had to find a way to dispose of any unsold Class 8 products, creating a potential waste problem.

Finally, by making municipal pesticide by-laws inoperative, the legislation prevents Ontario municipalities from enacting tougher pesticide rules within their boundaries. However, this uniform approach will create greater certainty, particularly for retailers and commercial applicators operating across the province.

Public Participation & EBR Process

MOE undertook consultation on the cosmetic pesticides ban in three stages, using three separate Environmental Registry notices. MOE received a staggering 6,997 comments in response to the policy proposal notice, 4,115 comments on the proposed *Cosmetic Pesticides Ban Act*, and 3,989 comments on the proposed regulation required to implement the ban. In addition, MOE reported that it held meetings with a broad range of stakeholders.

ECO Comment

Pesticides are biologically active substances specifically designed to kill target organisms, but can also impact non-target organisms. Reducing the volume of pesticides deposited in the environment is a worthy goal, and curbing unnecessary pesticide use is a logical place to start. This provincial legislation will ensure that cosmetic pesticide use is restricted across the province, not just in select municipalities.

MOE did a commendable job on public consultation for this initiative. Its use of the Environmental Registry to give notice and consult on the policy, Act and regulation, along with information sessions, provided ample opportunity for Ontarians to express their views. However, MOE also should have used the Environmental Registry to meet the public's right to comment on the Pesticide Classification Guideline and on the EBR classification of *Pesticides Act* instruments.

The cosmetic pesticides ban has been criticized in some quarters for not being "based on science" (see box). Indeed, the legislation appears to be more cautious than responsive to specific scientific information. However, such an approach is legitimate; it is an acceptable policy choice to decide, as MOE did here, that any risk presented by the use of pesticides – even one deemed "acceptable" by federal regulators – should be avoided, particularly in cases where that risk is unnecessary. However, MOE should have been more transparent about the basis for its decision.

Making Risk-Based Environmental Decisions

The decision of the government to ban the cosmetic use of pesticides has been controversial, partly due to confusion about the risk-based decision mechanism used as a rationale. Stakeholders on both sides of the issue have pointed to the MOE's Statement of Environmental Values (SEV) to support their argument.

Many opponents of the legislation charge that the ministry is committed in its SEV to making decisions that are "science-based" and they did not do so in this case. They argue that it is inappropriate to ban at least some of these pesticides because Health Canada and the World Health Organization have assessed them using a broadly-accepted scientific approach and deemed them to pose acceptably low ecological and health risks. Low is not zero, but from a scientific point of view there are always uncertainties and unknowns associated with any conclusion. It satisfies science to be confident that the uncertainty is within accepted limits.

Some supporters of the legislation cite the requirement in the SEV that the ministry take a "precautionary approach" to decision-making as justification for the ban. The precautionary approach requires that where there is a threat of serious or irreversible damage the lack of full scientific certainty shall not be used to postpone cost-effective measures to prevent environmental degradation. There is significant dispute about the seriousness of the risk presented by cosmetic pesticide use, and the degree of scientific certainty about that risk. This dispute is irresolvable; if the science is certain, the magnitude of the risk is known, and vice versa. In any event, the ministry did not declare the precautionary principle to be the basis of this policy decision.

In this case, it appears that the policy-makers accepted that the risks associated with such pesticide use were low by scientific standards, but then questioned if even very low risks are justified when the benefits to the practice are "cosmetic" (where that term has the connotation of being superficial, inconsequential or even trivial). They ask why society would accept any risk for no benefit and conclude that we should not. Thus, a new decision-making tool has been added to the environmental policy tool kit, perhaps it could be labelled the "No Risk for No Benefit" approach.

While the ECO would like to see efforts at pesticide reduction in all contexts, the exemptions to the ban are generally reasonable. The ECO hopes that MOE will be judicious, however, about prescribing any further exemptions. The ECO urges MOE to consider a schedule for the eventual phase-out of pesticides for exempted uses, as green alternatives and approaches to pest management become more mainstream.

The cosmetic pesticides ban represents a shift in philosophy for the province. MOE should have considered the economic impact of this shift on pesticide applicators, and how this specialized group could be supported in the short-term. Historically the province has assisted with the transitioning of industries whose viability is substantially undermined by regulatory changes.

MOE's approach to early enforcement of the ban seems reasonable. However, for the legislation to ultimately achieve its purpose, MOE will need to step up enforcement after a reasonable transition period, and ensure that it allocates adequate resources to continue enforcement on an ongoing basis.

The ECO will continue to monitor this issue and report on the ministry's progress in implementing and enforcing the cosmetic pesticides ban in the future.

For a more detailed review of this decision, see Section 4.3 of the Supplement to this Annual Report.

For ministry comments, please see page 165



4.7 Contaminated Sediment: A Better Assessment Approach

Background

In May 2008, the Ministry of the Environment (MOE) posted its decision to adopt the Canada-Ontario Decision-Making Framework for Assessment of Great Lakes Contaminated Sediment ("COA Framework"). Contaminated sediment is one of the critical factors contributing to degraded environmental conditions and the impairment of beneficial uses of many Areas of Concern (AOCs). Contaminants originate from industrial, municipal and non-point sources, and enter the Great Lakes via rivers, streams, pipes, discharge outlets and atmospheric deposition, accumulating in bottom sediments.

Contaminants can degrade water quality and adversely affect benthic (bottom-dwelling) organisms and the predators that consume them. Although some contaminants readily break down, others are persistent and can accumulate in the fatty tissues of organisms, and concentrate up the food chain in a process called biomagnification.

The decision to remediate should be driven by the magnitude of health risks to humans and wildlife from continued exposure to the contaminated environment. The selection of the appropriate remediation approach should consider whether the removal, treatment and disposal of the contaminated sediments would cause greater harm than leaving them in place.

In 1998, while MOE and Environment Canada (EC) were jointly involved in a sediment assessment and remediation project in the Cornwall area, staff noticed that contaminated sediments were assessed differently by the public and private sector, resulting in inconsistencies in clean-up decisions. This prompted EC and MOE to commit to developing a harmonized science-based sediment assessment framework.

Description

The COA Framework is designed to identify and assess contaminated sediment. It harmonizes federal and provincial approaches on sediment assessment and builds upon MOE's 1993 and 1996 provincial sediment guidelines. The COA Framework uses an ecosystem approach to assess sediments and considers possible effects on benthic and other aquatic organisms, including the potential for contaminants to biomagnify up the food chain. For a detailed review, see Section 4.4 of the Supplement to this Annual Report.

The COA Framework is intended to standardize the decision-making process province-wide while maintaining enough flexibility for site-specific considerations. The COA Framework process is outlined in a step-by-step flowchart and a decision-making matrix that are used to determine appropriate remedial actions or the necessity for additional assessments. The analysis used in the decision-making process incorporates data from four "lines of evidence" (LOE): sediment chemistry, sediment toxicity, benthos community alteration, and the contaminant's biomagnification potential. It also relies on four "guidance rules," which generally emphasize that decisions will be based on biological data, and not solely on chemical analysis.

The COA Framework, along with the 1993 and 1996 sediment guidelines, were integrated into the Guidelines for Identifying, Assessing and Managing Contaminated Sediments in Ontario: An Integrated Approach, May 2008 ("2008 MOE Guideline"). This document is intended to present all MOE's guidance on managing contaminated sediments in Ontario in a clear and transparent package.

Implications of the Decision

The COA Framework empowers decision-makers to evaluate what levels of contamination are acceptable in the short-term and how to proceed when sediments are considered clean; and when contamination is severe enough to warrant significant remedial action. These are key decisions for determining whether a site needs to be remediated.

The COA Framework, which is embedded in the 2008 MOE Guideline, can be applied to contaminated sediments across the province. Using an ecological risk assessment, the COA Framework standardizes the decision-making process while recognizing site-specific conditions and including input from professional judgment. The matrix helps ensure consistency and transparency by deriving appropriate actions based on the data from the four LOE entered into the matrix. Furthermore, MOE will rely on the sound science and transparent process to issue provincial clean-up orders that are more likely to withstand a legal challenge.

One key challenge when dealing with contaminated sediments is the cost required to assess and remediate a site. By identifying priority sites, the assessment process aims to ensure that limited resources are properly allocated. Otherwise, the COA Framework does not address social and economic considerations. However, these matters are acknowledged as important in the risk management section of the 2008 MOE Guideline.

MOE relies on the 2008 MOE Guideline for all its assessments and remediation projects. Where consultants, for example, use a different approach than the 2008 MOE Guideline, MOE will require them to provide the requisite information specified in the 2008 MOE Guideline and to obtain any outstanding information.

ECO Comment

By developing an integrated and harmonized contaminated sediment assessment and decision-making framework Ontario has met a commitment it made in the 2002 COA. The ECO is hopeful that the COA Framework will result in a more effective assessment process that assists in the identification and remediation of polluted waterbodies in Ontario.

The ECO commends MOE for creating a province-wide framework that enhances the scientific assessment process for contaminated sediments, and for carrying out comprehensive public consultation and national and international peer-review.

Scientists and decision-makers need to understand the ecological impairments resulting from contaminated sediments because this information informs the extent and scope of any necessary remedial and rehabilitative actions. In order to maintain policies that are up-to-date and current, the ECO urges MOE to

regularly review the 2008 Framework and 2008 MOE Guideline to ensure that scientific advancements are integrated into these documents.

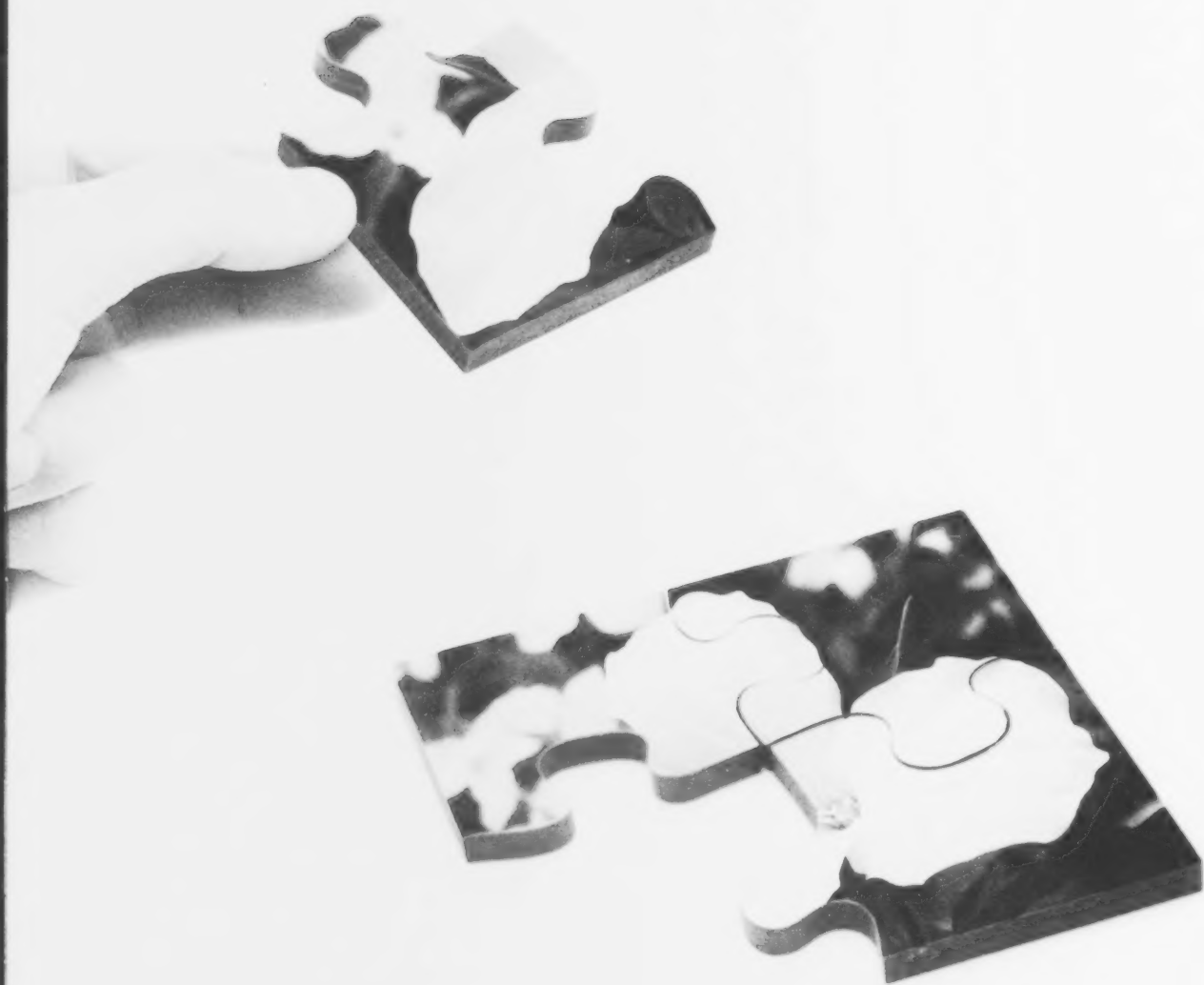
Ultimately, the effectiveness of the COA Framework will depend on factors beyond its scope, including government leadership, the actual use of the 2008 MOE Guideline, and adequate funding to carry out the assessments and remediation. Complementary provincial efforts are also required to curb the sources of contaminants that make their way into the environment.

The ECO will continue to follow developments on Great Lakes protection and the renewal of the Canada-Ontario Agreement Respecting the Great Lakes Basin in 2010. We will monitor whether AOC remediation remains a priority for Ontario, and whether adequate goals and commitments are made to address that priority.

For ministry comments, see page 166.



Part 5: Building Resilience in Infrastructure



This section describes three recent Ministry of the Environment (MOE) initiatives, one facilitating public transit infrastructure, and two responding to environmental problems in waste management. In each case, MOE has made a concerted effort to advance the environmental agenda: to ease approvals for municipal transit projects, to reduce greenhouse gas emissions from landfill sites and to stem the tide of hazardous electronic waste.

Will these initiatives also work towards building greater system resilience? This is a difficult call, and it may be premature to attempt the evaluation. It is, however, worth considering what might be the hallmarks of resilient infrastructure. Greater resilience would imply more willingness to diversify approaches, and less reliance on monolithic, centralized systems, for example, in the distribution of water and energy, and in the management of wastes. It would also require a greater openness to experiment and innovate, even if innovations work against efficiency in routine operations. It would also require attention to interactions between varying scales of infrastructure, and an appreciation of impacts on both very short and very long time scales.

Resilience in infrastructure is clearly relevant for disaster planning. In this context it is easy to understand the vulnerabilities of centralized, tightly interconnected systems and the value of redundancies and back-up systems to get communities through short-term emergencies of days or weeks. But resilient infrastructure is also vital to give societies options for more profound change, to allow them to evolve and adapt to new realities over decades and generations. In coming decades, will we be driving fewer cars and shorter distances? Will we find sustainable approaches for dealing with organic wastes? Will the rate of obsolescence for electronic technology and the volumes of e-waste accelerate further? The answers to these long-term questions will be dictated in part by the systems we are building today.

5.1 Transit Assessments: Is Faster Always Better?

In June 2008, the Ministry of the Environment (MOE) filed O. Reg. 231/08, the Transit Projects and Greater Toronto Transportation Authority Undertakings Regulation, under the *Environmental Assessment Act* (EAA). O. Reg. 231/08 establishes a new, streamlined assessment process for proponents of public transit to follow in order to expedite the development of transit projects in Ontario. MOE published a guidance document entitled Ontario's Transit Project Assessment Process which explains the step-by-step assessment process.

The rapid development of public transit is a key priority of the provincial government due to current and future perceived needs. In 2008, the government projected that Ontario's population would grow by 27.8 per cent, or 3.56 million people between 2007 and 2031, with a significant amount of growth occurring in major urban centres. Along with population, traffic volumes are predicted to increase substantially. Further congestion will serve to exacerbate current problems, such as increased travel times, delayed delivery of goods and services, reduced air quality and higher greenhouse gas emissions.

Description

Prior to O. Reg. 231/08, transit projects were subject to either Part II of the EAA and assessed on an individual basis, or followed the approved class environmental assessment process in the Municipal Class

Environmental Assessment. O. Reg. 231/08 establishes a third process. The Transit Project Assessment Process (TPAP) narrows the range of issues that may be raised in opposition to a project, places a firm time limit on public consultation and limits MOE's ability to delay a project. The TPAP is designed such that the assessment of potential environmental effects and decision-making can be completed within six months.

Once a proponent has selected a particular transit project, the proponent must notify the public that the proponent is starting the assessment process. The proponent then has 120 days to conduct public consultations and to complete an Environmental Project Report (EPR). Upon completion of both, the proponent must publish in a local newspaper and on their website a Notice of Completion. The public then has 30 days to review the EPR and submit written objections to the minister. The minister then has 35 days to either allow the project to proceed in accordance with the EPR, to require further consideration of the project, or to allow the project to proceed subject to certain conditions. The minister does not, however, have the power to terminate the process at this stage and the minister's powers to act are limited. The minister may only require further consideration of the project or impose conditions if he or she believes that:

- the project may have a negative impact on a matter of provincial importance that relates to the natural environment or has cultural heritage value or interest; or
- the project may have a negative impact on a constitutionally protected Aboriginal or treaty right.

If the minister requires further consideration of the project, the proponent must prepare and publish a revised EPR. Within 30 days of receiving this report, the minister may allow the project to proceed in line with the revised EPR. Alternatively, if the minister determines that further consideration did not adequately address the negative impacts, the minister may issue a notice terminating the process and require the proponent to proceed either under Part II of the *EAA* or under a Class EA.

Once the minister has given notice to proceed based either on the original EPR, the original EPR with conditions or the revised EPR, the proponent may submit and publish a Statement of Completion (SoC). As well, a SoC may be submitted by the proponent if no notice to proceed has been given by the minister within the 65-day review period for the original EPR, or within the 30-day review period for the revised EPR. Once a SoC has been submitted, the proponent can begin constructing the transit project.



Implications of the Decision

All Sizes of Public Transit Projects are Treated Similarly

Once a proponent determines that the project in question meets the definition of a "transit project" and falls within the class of projects identified in Schedule 1 of O. Reg. 231/08, the proponent may choose to follow the TPAP regardless of whether the proposed project is large or small, complex or straightforward. As indicated above, only in very limited circumstances can the minister require a proponent to carry out a Class EA or a full EA under the *EAA*.

The TPAP Should Provide a Faster, Easier and Less Expensive Alternative

O. Reg. 231/08 is intended to provide a more streamlined process for transit projects. MOE has stated that the regulation will “ease the regulatory burden on proponents of public transit projects by creating a time-limited, clearly articulated process resulting in more certainty for proponents undertaking public transit projects.” Accordingly, the TPAP should help address some of the criticisms of the EA process as they relate to transit projects (i.e., that they are often lengthy and subject to governmental delay). Once a project has been selected, O. Reg. 231/08 dictates strict timelines, and thus should facilitate the development of public transit in the province.

Assumes that Pre-planning Processes are Sufficient and Comprehensive

The TPAP is premised on an assumption that municipal planning processes, particularly in the area of public consultation, are both sufficient and comprehensive. While not dictating what must be done prior to beginning the process, the guidance document advises proponents to be “well prepared” and suggests that they “should consider involving or consulting with a broad range of potentially interested persons in pre-planning and decision-making leading up to the selection of a transit project.”⁸ Whether or not such prior consultation is as thorough or transparent as a regular EA process is an open question.

ECO Comment

The ECO views increased public transit as a highly desirable goal. There are, however, two concerns that the ECO has with O. Reg. 231/08. One is that various components of traditional environmental assessments are removed by O. Reg. 231/08. The *EAA* broadly defines the “environment” to include “the social, economic and cultural conditions that influence the life of humans or a community.” Within typical EA processes, therefore, these are legitimate grounds to be raised by the public in commenting on proposed projects. However, O. Reg. 231/08 explicitly limits the grounds upon which public concerns will trigger government intervention. This is of significant concern to the ECO, as social and economic considerations are often key issues that local citizens raise in opposition to proposed transit projects. It is likely that citizens will find alternative means, such as legal challenges or requests for judicial review, to express their concerns over issues such as these.

The second concern is that O. Reg. 231/08 adopts a “one size fits all” approach. Accordingly, large projects such as the Georgetown South Expansion and Union-Pearson Rail Link are subject to the same assessment process as much smaller projects with fewer potential impacts. Unlike the streamlined environmental assessment processes that MOE introduced for electricity in 2001 and waste projects in 2007, no “classification” or categorization scheme is included within O. Reg. 231/08 based on the type or size of the project or the scale of potential environmental impacts. Given that there are various levels of scrutiny associated with each of the categories for waste and electricity projects, the public has the option of requesting that a particular project be elevated.

Transit projects can be an extremely wise investment in the future. Through careful integration with smart land use planning, such projects can help curb urban sprawl, reduce greenhouse gas emissions, lower aggregate vehicle emissions, and help make cities much more liveable and sustainable. Not every proposed transit project is going to be a good one, however, and each project will have its own unique impacts and

benefits. As well, individual transit projects must be viewed within the larger context of an enhanced transportation framework. Fundamentally, the goal should not be an increase in transit projects, but a substantial increase in transit usage which is accomplished through effective overall transit planning.

Accordingly, while O. Reg. 231/08 has removed some key requirements of the EA process, such as the requirement to consider both the "need" for and the potential "alternatives" to a particular project, the ECO hopes that the planning processes used by all proponents will still include these considerations. While the ECO agrees that the requirement to determine "need" is much less relevant given the benefits of increased public transit, a requirement to consider "alternatives" is still in the public interest, particularly when various transit options have differing impacts socially, economically and environmentally. A careful weighing of alternatives, with public scrutiny, can lead to better overall outcomes and a wiser use of scarce public resources.

For a more detailed review of this decision please see Section 4.7 of the Supplement to this Annual Report.

For ministry comments, see page 166.

5.2 Landfill Gas Collection and Control Regulation

Description

As organic matter decomposes in landfills, various gases are produced by microbial processes, including methane and carbon dioxide (CO_2). In a typical landfill, approximately 50 per cent of the gas generated is methane, and 50 per cent is CO_2 . While each of these contributes to climate change, methane is of greater concern as it has a global warming potential 25 times greater than CO_2 based on a 100-year time horizon. In 2007, methane released from landfills contributed an estimated 3.6 per cent of Ontario's CO_2 equivalent emissions. By capturing methane, and either flaring or burning it to generate electricity, approximately 95 per cent of the gas's global warming potential is eliminated.

In June 2008, new rules came into force under the *Environmental Protection Act (EPA)* that will increase the number of Ontario municipal landfills required to have landfill gas collection systems in place. Landfill owners are also required to produce annual reports on landfill gas reductions. Prior to these amendments, only landfills with a capacity in excess of three million cubic metres were required to have such systems. The new rules require gas collection systems for landfills that have a capacity exceeding 1.5 million cubic metres. As well, landfill operators are required to provide an annual report to MOE indicating the volume of landfill gas collected by the facility, the percentage of gas that was methane, and the amount of methane that was reduced either through flaring or burning for power generation. Exemptions can be granted where the nature and quantity of gas generated at a particular site is not likely to be of significant concern. For a more detailed review of this decision, please see Section 4.8 of the Supplement to this Annual Report.



Organic Diversion Efforts

Organic waste, which is produced by households, businesses and other institutions, makes up as much as one-third of the municipal solid waste stream in Ontario and is the major source of methane in landfills. Significant gains have been made by municipalities in diverting household organics from landfills either through backyard composting programs, or curbside or depot collection. The overall volume of organics diverted from landfills through these efforts increased significantly between 2002 and 2007, from about 360,000 to well over 600,000 tonnes.



The provincial government recognizes the importance of such diversion efforts. In 2004, it established a goal to divert 60 per cent of Ontario's non-hazardous solid waste from disposal by the end of 2008, and renewed these efforts in October 2008 by releasing a discussion paper on the province's *Waste Diversion Act, 2002* for public comment.

Energy Production from Landfill Gas

Landfill gas can be burned to generate electricity; however, both the volume and concentration of methane must be high enough to make this process work efficiently. The formation of methane depends upon the amount of organic waste in the landfill and the temperature and moisture content of the landfill. Some of Ontario's municipal solid waste landfills, which are designed to allow a certain amount of rainfall to seep in annually, may generate enough gas with high enough methane concentrations to make energy production worthwhile. The gas is collected through a system of vertical plastic perforated pipes inserted into the landfill at regular intervals. Horizontal header pipes collect the gas and deliver it to the site where the power is generated, usually by means of an engine or turbine paired with an electrical generator. This electrical power is then fed into the power utility's grid.

The efficiency of a methane capture system depends upon various factors, such as the placement of the pipes and the permeability of the containment materials around the landfill. Accordingly, the methane capture rate can be as low as 20 per cent or as high as 90 per cent. Any gas not captured by the system is eventually released to the atmosphere. The need to create higher methane generation rates (in order to make a gas collection and utilization system viable) could result in landfills designed to be wetter, simply because wetter material decomposes more quickly. Depending on the actual capture efficiency, higher fugitive methane emission rates resulting from wetter landfills could reduce, offset or even exceed the potential environmental gains from landfill gas capture and power generation.

ECO Comment

The ECO believes that the best solution to deal with greenhouse gases from landfills is to reduce or ideally eliminate, on a go-forward basis, the amount of organic matter that ends up in them. The ECO is pleased to hear that MOE has initiated a review of the *Waste Diversion Act, 2002*, with intentions to encourage the development and expansion of organic waste diversion programs, processing capacity and composting.

The ECO supports aggressive diversion programs, but urges that such programs be structured within the context of an overall solid waste management strategy.

The ECO is somewhat concerned about the conflicting messages that municipalities may be receiving from the provincial government with regard to organic waste. While the government is promoting increased diversion programs, these new requirements for methane collection systems may result in a situation where municipalities need to continue landfilling organic matter, rather than diverting it, in order to "feed" costly methane collection systems.

Finally, the ECO recognizes that zero organic landfill waste is not achievable in the near future and supports all efforts to minimize the environmental damage caused by current and legacy disposal practices. While initiatives to capture methane are supported, the ECO believes that some questions remain outstanding regarding the overall environmental efficacy of current landfill gas capture systems when methane production is accelerated.

For ministry comments, please see page 166.



5.3 Taking a Byte out of E-Waste: The Waste Electrical and Electronic Equipment (WEEE) Program Plan

In July 2008, the Minister of the Environment approved the first phase of the Waste Electrical and Electronic Equipment (WEEE) Program Plan (the "plan"). This five-year plan was developed by Waste Diversion Ontario (WDO) in co-operation with Ontario Electronic Stewardship (OES) to improve the diversion of televisions, fax machines, computers and peripherals from landfill. WDO is a non-Crown corporation created by the *Waste Diversion Act, 2002 (WDA)* to develop, implement and operate waste diversion programs. OES is the Industry Funding Organization (IFO) incorporated by WDO to co-operatively develop, implement and operate the WEEE program.

This plan was developed to address the increasing amount of WEEE sent for disposal in Ontario landfills or to developing countries. Unless properly handled and managed, the toxic materials they contain (e.g., lead, cadmium, mercury) threaten ecosystems and human health. (For a more detailed review of this decision, see Section 4 of the Supplement to this Annual Report).

Brand owners, first importers and/or assemblers of non-branded electrical and electronic equipment (EEE) for sale and use in Ontario are designated in the plan as stewards. To cover the program's operational costs, stewards are required to pay a fee to OES for each product introduced into Ontario, whether sold or otherwise entering the marketplace. Stewards are free, however, to shift the cost of the fee forward to consumers by raising the product price. Stewards that wish to take direct responsibility for managing their obligations under the *WDA* can apply to the WDO for approval of an Industry Stewardship Plan (ISP).

The first phase of the program, which commenced April 1, 2009, targets the WEEE materials listed in the

first column of Table 1. Phase 2 of the plan, which is due on July 10, 2010, will target materials including copiers, telephones, cameras, and audio and video equipment.

Overview of Phase 1 of the WEEE Program Plan

The plan aims to triple the amount of WEEE collected and recycled over the next five years by expanding Ontario's existing collection system. Although participation in the program by WEEE collectors is voluntary, OES intends to motivate collector participation by offering weight-based financial incentives and transportation services for WEEE collected for end-of-life management.

Reuse and refurbishment organizations will be encouraged to act as collection sites and expand their operations, but will be required to meet a Reuse & Refurbishment Standard to participate in the program. OES does not intend to provide collection or transportation incentives for collected WEEE that is destined for refurbishment and/or reuse.

WEEE collected at OES-approved collection sites will be transported to consolidation centres for quality check, verification and recording of monitoring data before shipment to primary processors. Primary processors undertake any of the following: receiving, sorting, brokering, transporting, dismantling, disassembling, shredding or any other material processing activity, and disposal. Under the plan, OES selects primary processors through a Request for Proposal (RFP) process and allocates collected WEEE to selected processors through a competitive bidding process. Primary processors may then send WEEE components to downstream processors for the further manual or mechanical separation of materials. Downstream processors may separate, process, recover or dispose of materials.

To participate in the program, processors must meet not only regulatory requirements, but also OES's Electronics Recycling Standard, which is intended to assist in determining whether WEEE materials are managed in a way that safeguards worker health and safety and the environment. Materials managed through incineration, energy recovery and landfill do not constitute diversion under the WEEE plan. To help achieve collection, reuse and recycling targets, the plan includes a province wide promotion and education program and research and development activities. While the plan contains no targets for reducing the amount of WEEE produced, OES intends to report on examples of Design for the Environment (DfE) initiatives undertaken by OES members to reduce waste.

Public Participation & EBR Process

The Ministry of the Environment (MOE) posted the proposal on the Environmental Registry for a 30-day comment period and received 26 comments. Throughout plan development, WDO and OES consulted with stakeholders through workshops and meetings.

There was general support for the plan from municipalities, environmental groups, electronics manufacturers and retailers, although several commenters questioned aspects of the plan from both an environmental and economic perspective. The primary complaint amongst plan supporters was that it fails to prioritize WEEE reduction and reuse over recycling. It was suggested that the lack of reduction and reuse measures in the plan arises from the fact that the OES board is dominated by electronic manufacturers and

retailers who stand to lose money if consumers reduce their purchases of new electronics or choose used/ refurbished units over the newest models.

Other commenters questioned the adequacy of collection incentives and targets, the accessibility of drop-off locations, or the consideration of submitted concerns during plan development.

A few commenters rejected the waste diversion initiative outright, claiming that the WEEE program is highly intrusive and creates an OES-controlled monopoly that will limit the free market economy and stifle investment and innovation in the recycling industry.

ECO Comment

The ECO believes aspects of the plan will help address the continually growing problem of WEEE. The WEEE plan outlines targets, standards, and processes to improve the collection of WEEE and ensure that it is recycled in a manner that minimizes human and ecosystem impacts. Nonetheless, the ECO believes the plan includes a serious flaw in that it fails to prioritize reduction and reuse over recycling.

The rapid obsolescence of certain electronic products and the limited regulatory clout of the Ontario government over globally-marketed products may make a recycling-focused program seem the most attractive and efficient solution – especially to electronics manufacturers and retailers. However, even if the OES program collects and recycles most of Ontario's WEEE, this approach cannot be sustainable in the long-term since recycling may degrade the viability and value of industrial materials, squandering the embodied energy used to construct high value components. Ontario should take a leadership role, along with other leading jurisdictions like the EU, and encourage transformative thinking in WEEE management.

"Ontario should take a leadership role, along with other leading jurisdictions like the EU, and encourage transformative thinking in WEEE management."

Any progressive waste diversion plan includes measures to reduce the amount of waste produced in the first place. We are, therefore, disappointed that the plan does not offer incentives or requirements for manufacturers to:

- reduce the amount of plastics or toxic substances used in EEE,
- improve the ease of disassembly and recycling,
- increase the capacity for product or component reuse; and/or
- extend the life of electronics through improved product design and durability.

Moreover, because manufacturers are charged a flat recycling fee irrespective of a product's environmental performance, and because improvements to a product's recyclability will benefit all competing stewards equally, the plan may actually discourage manufacturers from greening their products.

In 2007, the Minister of the Environment asked that WDO's WEEE program consider "incentives encouraging stewards to initiate measures designed to reduce waste resulting from their products, increase recyclability of products and increase use of recycled content of products." The ECO does not believe that OES's intended reporting of steward initiatives will be sufficient on its own to drive manufacturers to green their products. To fulfil the minister's request, MOE should ask WDO and OES to

strengthen WEEE reduction measures in the program, giving a deadline for the delivery of DfE incentives and initiatives.

In the traditional 3Rs hierarchy, "reduction" is accorded the highest priority, followed by "reuse" and finally "recycling." The ECO is disappointed that the plan offers collection and transportation incentives for "non-reusable" WEEE headed for recycling but not for WEEE destined for reuse. The ECO is concerned that these incentives may motivate organizations to recycle WEEE that could have been reused. The ECO therefore suggests that the program prioritize reuse over recycling by offering financial incentives for collecting reusable WEEE. The ECO also believes the plan should set much more ambitious reuse targets and should exclude customer and end-of-lease returns in its reporting of the number of electronics reused. Electronics returned to a retailer, manufacturer, or leasing company (either because of customer dissatisfaction or the end of a lease) were never expected to be discarded by the customer into the waste stream, and so do not truly represent waste diversion.

It seems likely that the shortage of WEEE reduction and reuse measures in the plan reflects the manufacturer/retailer composition of the OES board. The ECO notes that while the Minister of the Environment originally requested that the WEEE IFO's Board of Directors be mixed in composition, the implementing regulation (O. Reg. 393/04) now requires OES board members to be a "director, officer or employee of a corporation that supplies a product from which WEEE is derived." The ECO encourages MOE to amend O. Reg. 393/04 to require the inclusion of OES board members representing municipalities, recyclers, consumers, and environmental non-government organizations, as intended in the Minister of the Environment's initial request letter.

To actively encourage the diversion of WEEE from landfill, the ECO believes that MOE should consider restrictions on the hazardous materials permitted in EEE, as exist in the EU and California, and a ban on WEEE in landfills, similar to the ban in Nova Scotia.

The Unnecessary Dumping of Analog Televisions

Come August 31, 2011, the roughly 10 per cent of Canadians who rely on rabbit ears or other types of antennas to watch television will need to buy an analog-to-digital converter box, replace their TV with a digital model, or subscribe to satellite or cable service to receive Canadian stations. The Canadian Radio-television Telecommunications Commission (CRTC) is requiring Canadian broadcasters to switch from analog to digital transmission. This will permit the available bandwidth to be reallocated more efficiently for purposes such as advanced wireless, open Internet access, and the transmission of public safety services for police and fire departments. Because US broadcasters were required to make the transition from analog to digital transmission by June 2009, Ontarians living near the Canada-US border are no longer able to use antennas to receive US television stations.

While affected television owners could adjust to the changeover simply by purchasing a \$100 converter box, approaching transition deadlines appear, instead, to have driven many Ontarians near the Canada-US border to discard analog televisions in good working condition in favour of new digital sets. In October 2008, months before the US transition, one recycling depot in Windsor reported receiving old televisions faster than it could truck them away. This could be due to a lack of publicity about the availability of the converter box, the decreasing prices of LCD and plasma screen televisions, and the incorrect assumption

by some Ontarians that their analog televisions would no longer continue to function. Whatever the case, both the US and Canadian transition to digital broadcasting will likely lead to a dramatic increase in the amount of Waste Electrical and Electronic Equipment (WEEE) generated in Ontario.

To ensure that usable televisions are not unnecessarily disposed of into Ontario's waste stream (and WEEE program), MOE should actively promote the analog-to-digital converter box and publicize that analog televisions connected to satellite or cable service will continue to function. In the US, the federal government has distributed coupons to subsidize the purchase of converter boxes.

Unfortunately, neither the ministry's website nor news releases make any mention of the transition or the ability of converter boxes to accommodate the transition without the purchase of a new television. MOE is missing an excellent opportunity to promote reuse over recycling and lessen the introduction of dangerous materials into Ontario's landfills.

For ministry comments, please see page 166.



Part 6: *EBR* Applications: Some Highlights



Under the *EBR*, Ontario residents have the right to ask prescribed government ministries to review an existing policy, law, regulation or instrument (such as a Certificate of Approval or permit) if they feel that the environment is not being protected. Residents can also request prescribed ministries to review the need for a new law, regulation or policy. Such requests are called applications for review.

Ontario residents can also ask ministries to investigate alleged contraventions of specific environmental laws, regulations and instruments. These are called applications for investigation. Applications for investigation may be filed under 17 different laws that are prescribed under the *EBR*.

Applications for review or investigation are first submitted to the Environmental Commissioner of Ontario, where they are reviewed for completeness. Once ECO staff members have decided that a particular application meets the requirements of the *EBR*, the ECO forwards it to the appropriate ministry. The ministry then decides whether it will conduct the requested review or investigation, or whether it will deny the request. The ECO reviews and reports on the handling and disposition of applications by ministries.

Members of the public often raise important environmental issues through applications, sometimes focusing on site-specific case studies, sometimes critiquing province-wide laws or policies, and sometimes drawing attention to policy vacuums. Applicants often support their arguments with an impressive level of technical knowledge and thoughtful insight, and can show admirable passion, tenacity and patience in the face of frustrating situations. Applications serve as an important ground-truthing mechanism for both the ECO and ministries, highlighting issues that really matter to the public, and often spurring further research.

For Review Only

- the Ministry of Transportation (MTO);
- the Ministry of Energy and Northern Development (MEND);
- the Ministry of Natural Resources (MNR);
- the Ministry of Northern Development and Mines (MNDM); and
- the Technical Standards and Safety Authority (TSSA) of the Ministry of Small Business and Consumer Services.

Two ministries are required to respond to applications for review only:

- the Ministry of Agriculture, Food and Rural Affairs (OMAFRA); and,
- the Ministry of Municipal Affairs and Housing (MMAH).

In the 2008/2009 reporting year, the ECO reviewed 29 applications for review and 14 applications for investigation. Individual applications for review and investigation received by the ECO may be forwarded to more than one ministry if the subject matter is relevant to multiple ministries, or if the applicants allege that Acts, regulations or instruments administered by multiple ministries have been contravened. Of these 43 applications, the ministries concluded that a review or an investigation was warranted for only nine applications. In many cases, the ECO disagrees with the decision to turn down an application and believes that the issues raised by the applicants did merit a review or an investigation.

The ECO's detailed reviews of applications for review and investigation are found in Sections 5 and 6 of the Supplement to the Annual Report. In the following pages, brief summaries of selected applications handled by ministries during this reporting period are provided.

Part 6: *EBR* Applications: Some Highlights



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- the Ministry of Natural Resources and Forestry (MNR)
- the Technical Standards and Safety Authority (TSSA) or the Ministry of Consumer Services

- the Ministry of Agriculture, Food and Rural Affairs (MARA), and
- the Ministry of Municipal Affairs and Housing (MMAH)

In the 2008/2009 reporting year, the ECO received 14 applications for review and 14 applications for investigation. Individual applications for review and investigation received by the ECO may be forwarded to more than one ministry if the subject matter is relevant to multiple ministries, or if the application alleges that Acts, regulations or instruments administered by multiple ministries have been contravened. Of these 43 applications, the ministries concluded that a review or an investigation was warranted for only nine applications. In many cases, the ECO disagrees with the decision to turn down an application and believes that the issues raised by the applicants did merit a review or an investigation.

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6.1 Air Pollution: Hot Spots, Soot, Dust and Smoke

Introduction

Every year, the ECO receives applications from Ontario residents who are concerned about air quality and its effects on the environment and health. Applicants' concerns are based on far-ranging yet often interconnected issues, including: smog, greenhouse gases, industrial emissions, persistent toxic contaminants, transportation emissions, and transboundary air pollution.

Concern is growing about the cumulative and synergistic effects of air contaminants, particularly in urban settings and heavily burdened airsheds or "hot spots" – areas where several types of heavy industry or other pollution sources are clustered together, resulting in disproportionately high concentrations of air pollution. A recent Ontario court decision involving a citizen challenge of an industrial facility's approval to burn used tires confirmed that the Ministry of the Environment (MOE) must consider its Statement of Environmental Values, including consideration of cumulative effects, when issuing environmental approvals (see Part 9, Lafarge decision).

During this reporting year, the ECO received four applications expressing various concerns about Ontario's air regulatory framework, including concerns about heavily burdened airsheds and the regulation of hot spots. We briefly describe these applications below; for more information, refer to the Supplement to the Annual Report, Sections 5 and 6.

Black Soot Discharges in the City of Hamilton

In November 2008, two applicants requested that MOE undertake an investigation of alleged discharges (or "fallouts") of black soot and particulate matter from three large industries in the City of Hamilton. For several years, the residents of northeast Hamilton have complained that repeated fallout events have caused damage to property and negatively affected their quality of life. During the summer of 2006, complaints of extreme black fallout events led MOE to sample residential properties, inspect industries, and produce a report on the fallout events. Although the report was unable to definitively ascribe the incidents to any one emissions source, it concluded that the events could be attributed to three companies in the north end of Hamilton. Since 2006, incidents of sooty deposits have continued to affect residents of northeast Hamilton.



In this application, the applicants (one of which was the City of Hamilton) allege that one or more of the three companies have contravened section 14(1) of the *Environmental Protection Act (EPA)* (i.e., discharging a contaminant into the natural environment that causes an adverse effect). The applicants stated "[t]he failure of [MOE] to resolve this matter and to make the contraveners accountable for their actions/inaction is of serious concern to the City of Hamilton and to members of the public."

In January 2009, MOE denied the application for review, stating that "these matters are either currently under active investigation by the

ministry's Investigations and Enforcement Branch (IEB) or have been investigated by the ministry's Hamilton District Office and closed." MOE stated that it will, however, "continue to inspect companies both proactively and reactively to ensure that companies follow through on commitments to identify problems and improve operations."

The ECO believes that MOE's rationale for denying this investigation is valid; it was already well aware of and investigating the ongoing problem of black sooty fallout in Hamilton. Nevertheless, the ECO appreciates the frustration that the City of Hamilton and its residents must have with this chronic pollution problem and urges MOE to take the steps necessary to resolve it.

Certificates of Approval (Air) for Industrial Facilities in the City of Hamilton

In February 2008, applicants asked MOE to review two Certificates of Approval (Cs of A) for air issued to Poscor Mill Services Corp. (Poscor), for the operation of two open-air scrap yards in Hamilton. At both facilities oxy-propane torches are used to cut large metal pieces for 16 to 24 hours a day, discharging particulate matter and metal emissions into the air.

The applicants stated that Environment Hamilton staff, residents of the area, members of the community and consultants witnessed visible emissions from these facilities. The applicants requested that MOE impose emission control requirements at both facilities similar to those in Cs of A issued to a comparable metal cutting facility in Hamilton.

In May 2008, MOE agreed to undertake the requested review to determine whether amendments to the Cs of A would be appropriate, and to determine whether MOE's ongoing abatement efforts are adequate. Upon concluding its review in December 2008, MOE proposed amendments to the Cs of A to "require Poscor to undertake source testing and use this information to update its Emission Summary and Dispersion Modeling report." MOE stated that amendments to the Cs of A will also require the company to develop and implement best management practices (BMP) plans to reduce fugitive dust emissions and impacts, and to reduce fumes and opacity-related issues associated with torching activities.

MOE further concluded that abatement action taken by the Hamilton District office of MOE was "in accordance with the ministry's Compliance Policy." MOE indicated that the Hamilton District office will continue to monitor the sites to ensure that the BMP plan adequately addresses fugitive dust and visible emissions.

The ECO is pleased that MOE agreed to undertake a review of Poscor's Cs of A and commends MOE's conclusion that Poscor's Cs of A should be amended to address this long-standing pollution problem. The ECO also applauds MOE's ongoing abatement efforts in response to complaints and scheduled inspections.



The Need for the Regulation of Ontario's Air Pollution Hot Spots

In early 2009, the ECO received an application requesting a review of the need for a new regulatory framework related to the cumulative impacts of air pollution. The applicants assert that Ontario's current framework lacks a process to address or reduce the cumulative effects of emissions, and is "unable to adequately protect the environment or human health from the dangers associated with air pollution."

The applicants are particularly concerned about air pollution hot spots, and argued that people living in hot spot areas are exposed to levels of air contaminants "grossly disproportionate to the amount, type and concentration of air pollution in most other communities in Ontario." The applicants focused on the environmental health crisis in the community of Aamjinaang First Nation near Sarnia, Ontario, a well-known hot spot area known as "Chemical Valley," as evidence of significant deficiencies in the existing air regulatory framework.

In May 2009, MOE notified the applicants that it would undertake the requested review. MOE stated that it is "currently reviewing how it applies the principles of its Statement of Environmental Values (SEV), including cumulative effects assessment and the ecosystem approach, in its environmentally significant decision making," and that, as part of that review, it would review the matters raised in the application.

The ECO is pleased that MOE has agreed to undertake this review. As MOE's review is ongoing, the ECO will report on the ministry's handling of this application and the outcome of the review in a future reporting year.

Ontario's Policies to Address Open Burning

In March 2007, applicants requested that MOE review Ontario's policies on open burning. The applicants maintained that open burning of firewood, brush, leaves, etc. in urban areas creates a health hazard, both locally (especially through high particulate levels) and regionally (by its contribution to smog). The applicants claimed that open burning in general produces local emissions in excess of regulated standards. They argued that these emission levels constitute an "adverse effect" and fail to comply with section 14(1) of the *EPA*.

The applicants noted that the Ontario Fire Code (O. Reg. 213/07) prohibits open burning without a permit. However, municipalities are not required to take environmental criteria into account when creating or enforcing by-laws that allow permits for open burning. The applicants expressed concern that municipalities are regulating open burning based on legal authority that is not environmental in intent, and that open burning should be under provincial environmental authority.

In June 2008, MOE indicated that it would not undertake the requested review. MOE stated that the scientific evidence presented did not suggest that, in the circumstances modelled, open burning would result in emissions in excess of the standards, as claimed by the applicants. Furthermore, the ministry stated that if open burning causes an adverse effect or exceeds emissions standards, MOE could still prosecute under the *EPA*. MOE also pointed out that there are several mechanisms in place providing opportunity to periodically review and assess this issue. MOE concluded that "the potential for harm to the environment is minimal if the review applied for is not undertaken."

Although MOE did not mention it in its response to the applicants, an MOE staff member had been working with The Clean Air Partnership's Fireplace Code Advisory Group on a "Municipal Code of Practice for Indoor and Outdoor Fireplaces including Open Air Burning in Ontario" since early June 2008. A final draft of this document was sent to the applicants in March 2009. The proposed Code of Practice provides municipalities with a model set of conditions from which municipalities can draw to create or to modify open-burning by-laws. The ECO supports this proposed Code of Practice, which is in fact a comprehensive approach to all types of residential burning (e.g., fireplaces, wood stoves, agricultural burning, etc.), and goes well beyond the subject of open burning in municipalities.

The ECO believes that MOE's approach is generally reasonable and its justifications for not reviewing open-burning policies and regulations seem valid. However, the ECO finds MOE's response to the applicants was somewhat disingenuous, at the same time that MOE told the applicants that their evidence "is not persuasive that open burning in urban environments is an urgent and significant concern," it was entering into a review process very similar, if somewhat broader, than that requested by the applicants. Further, a number of the applicants' concerns (e.g., potentially harmful effects of PM_{2.5} emissions), which MOE concluded in its written response were not adequately supported by the evidence in the application, are identified in the proposed Code of Practice as issues of serious concern and as justification for increased control of open burning practices.

ECO Comment

The applications submitted this year indicate that Ontario's air regulatory framework is failing to address problems experienced in heavily burdened airsheds. Air pollution hot spots are problematic not only because Ontarians living in these areas are subjected to higher concentrations of air contaminants, but also because multiple emitters in those areas make abatement and enforcement by MOE significantly more challenging.

The ECO commends MOE for treating Ontarians' air quality concerns seriously and for taking action to respond to such concerns. However, *ad hoc* responses to public complaints about specific events and after-the-fact investigations are not enough to resolve the chronic issues that plague residents living in these stressed airsheds.

The ECO has long pointed to the need to address cumulative and synergistic effects of air pollution, and MOE has itself acknowledged that the existing regulatory framework requires "future policy direction" to address "background concentrations, cumulative or synergistic effects, persistence and bioaccumulation of contaminants."

The ECO is pleased that MOE is working to incorporate cumulative effects consideration into its environmental decision-making. The ECO sees a need for system-wide changes to the air permitting process to ensure that it is protective of health and the environment in all Ontario communities.

For ministry comments, please see page 167

6.2 Water Pollution: Leachate, Sewage and Stormwater

Introduction

Ontario's lakes, rivers and streams represent an important natural resource, providing drinking water, recreational opportunities and essential ecological functions. This resource, however, continues to be endangered by untreated sewage, polluted stormwater, industrial effluent, agricultural runoff, climate change and other threats. The Ontario government must be proactive in addressing these risks.

This year, Ontarians filed several applications requesting that the Ministry of the Environment (MOE) investigate the alleged discharge of contaminants into water. The ECO reports on MOE's handling of some of these applications in this section of the Annual Report. For more information, refer to Section 6 of the Supplement to this Annual Report.

Discharge of Effluent from a Radioactive Waste Management Facility

In August 2008, applicants filed an application for investigation contending that Cameco Corporation contravened section 14 of the *Environmental Protection Act (EPA)* and section 30 of the *Ontario Water Resources Act (OWRA)* by discharging effluent into Lake Ontario from a low-level radioactive waste management facility in Welcome, Ontario. In spring 2008, it was discovered that the pipeline between the Welcome Waste Management Facility (WWMF) and the lake had been severed and was discharging effluent onto the shore. The applicants alleged that discharged contaminants were likely to impair Lake Ontario, pollute drinking water, and limit residents' enjoyment of nearby property. Effluent samples taken by the applicants indicated levels of arsenic and uranium exceeding the Provincial Water Quality Objectives (PWQOs). The applicants also alleged that Cameco violated the spill reporting requirement under section 15 of the *EPA*.

In October 2008, MOE denied the application for investigation. MOE stated that the Canadian Nuclear Safety Commission (CNSC), the federal regulatory agency responsible for licensing nuclear facilities (including radioactive waste management facilities), is requiring Cameco to undertake a comprehensive technical assessment of the WWMF. CNSC outlined an action plan for Cameco and requested that the company conduct a risk assessment and repair the effluent discharge pipe prior to the 2008 winter season. Preliminary evaluations of risk by MOE and CNSC concluded that exposure to the discharged effluent does not pose an immediate concern.

MOE stated that it will assist CNSC by providing technical advice on Cameco's submissions and ensuring the facility's operations are protective of the natural environment and human health. MOE will also ensure that future licensing requirements consider the PWQOs. MOE noted that a May 2008 inspection of the Port Hope municipal water plant confirmed that treated water quality continues to meet Ontario Drinking Water Quality Standards.

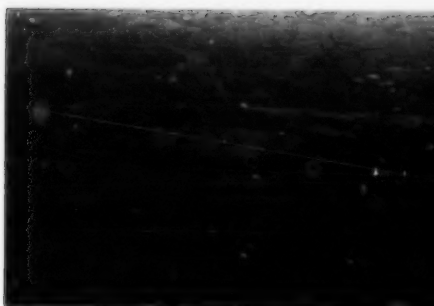
The ECO is satisfied with MOE's rationale for denying this application and is pleased that MOE worked with CNSC to address the application's concerns. Given the multi-jurisdictional complexity of regulating the

nuclear industry, it is vital that MOE uphold its pledge to continue working with CNSC in its assessment of the WWMF, and to monitor and evaluate water quality surrounding the facility to ensure contaminants do not exceed provincial requirements.

Discharge of Sewage from Cottage Septic Systems

In October 2008, applicants filed an application for investigation, alleging that contraventions of section 30(1) of the *OWRA* were occurring on Lake Matinenda (the "Lake"), near the Town of Blind River. Specifically, they alleged that many cottages on the Lake have faulty, non-permitted septic systems, leading to illegal discharges into the waterbody. Further, they accused the Town of Blind River and the Algoma Public Health Unit (APHU) of permitting the discharge of untreated sewage into surface and ground water supplies.

In December 2008, MOE denied this application, stating that a review of water quality data collected by the ministry, the APHU and MOE's Lake Partners Program since 2005 does not suggest significant concerns for the Lake. MOE also noted that while it is responsible for enforcing the *OWRA* and retains authority over large communal septic systems, small onsite septic systems are regulated by O. Reg. 350/06 under the *Building Code Act, 1992 (BCA)*, which is administered by the Ministry of Municipal Affairs and Housing (MMAH). In the late 1990s, MMAH delegated regulatory authority for permitting and inspecting small onsite septic systems to local enforcement agents, like APHU. Prior to this, MOE had responsibility for small onsite septic systems under the *EPA*.



Since the root of the applicants' concern is small onsite septic systems, which are no longer directly regulated by MOE, the ECO believes that MOE was justified in denying this application. Nevertheless, the ECO is not entirely satisfied with MOE's response. Although MOE stated that the potential for water quality degradation is within the scope of its review of the alleged *OWRA* contravention, unfortunately MOE failed to clarify why this provision could not be exercised in this instance; namely, that the Lake's data do not show evidence of water quality impairment.

Furthermore, MOE indicated in its response that an "investigation" is ongoing, but was referring to survey work conducted under MOE's Lake Partners Program. While this action is welcomed, the ECO does not believe it addresses the issue of faulty septic systems and cannot be considered comparable to an "investigation" as intended by the *EBR*. Finally, MOE's suggestion that matters in the application be forwarded to MMAH via the ECO for follow-up was unhelpful since neither MMAH nor its legislation are subject to *EBR* investigations.

Discharge of Stormwater from a Cobourg Sewer Pipe

In April 2008, applicants requested an investigation of a stormwater sewer pipe constructed by the Town of Cobourg (the "Town"). In October 2005, MOE issued a Certificate of Approval (C of A) under section 53 of the *OWRA* to the Town to construct storm sewers on Coverdale Avenue and construct a new outfall structure to discharge stormwater to Lake Ontario. The applicants alleged that in constructing the sewer

and reconstructing the storm sewer outlet, the Town enabled the discharge of high levels of total coliform and *E. coli* into Lake Ontario, contravening the *EPA* and causing adverse effects. To support this allegation, the applicants submitted the results of water samples collected from the outlet area. MOE accepted the application for investigation.

In December 2008, MOE responded it had completed its investigation and that "the stormwater quality is within ranges that may be expected for such municipal stormwater sewer systems; however, the outflow may lead to localized negative effects in the near-shore environment close to the outfall, under certain weather conditions." MOE stated that it is working with the Town to ensure that beneficial management practices are implemented to improve stormwater quality, and determine additional actions to minimize the effects of the outfall's discharge. The ministry made recommendations to the Town to improve stormwater quality (and associated shoreline conditions) and minimize human health impacts.

The ECO is pleased that MOE undertook this application and agrees that the water samples submitted by the applicants do not prove that the quality of the stormwater discharge was affected by the reconstruction of the stormwater sewer. Moreover, the ECO agrees with MOE that the analyzed water samples suggest

that the stormwater quality is within expected ranges. The ECO is disappointed, however, that MOE did not conduct its sampling under "first-flush" conditions, which would have shown the highest levels of bacterial contamination in the stormwater discharge. By sampling the outlet during a variety of conditions (including heavy storms), MOE would be better able to estimate the *E. coli* counts typical of this outfall and more accurately attribute them to precipitation levels. The ECO supports MOE's recommendations to the Town, particularly maintaining roadside ditches and grassed swales to provide infiltration for stormwater runoff and including stormwater discharges in the Town's Pollution Control Plan.



ECO Comment

The ECO agrees with MOE's decisions in handling these applications. Nevertheless, the ECO believes they draw attention to larger environmental concerns.

The Lake Matinenda application points to the pressing need for MMAH to improve its handling of small onsite septic systems under the *BCA* and Building Code, which sets no clear requirements for municipalities or local health units to carry out mandatory septic system re-inspections. While MMAH has proposed requirements for maintenance inspections (or re-inspections) of existing onsite sewage systems (Environment Registry Number 010-3036), the ministry has not suggested any new funding mechanism to implement them. Because municipalities are reluctant to impose the costs of an inspection program (and resulting septic system upgrades) on local ratepayers, it is estimated that only 20 Ontario municipalities have re-inspection programs. Surely a comprehensive program of septic system inspection and re-inspection would be far preferable to the slow, but inexorable degradation of thousands of Ontario cottage lakes.

Both the WWMF application and the storm sewer application point to the importance of informing the public about the safety of recreational waters. In Ontario, there are approximately 40 municipal beaches on Lake Ontario that report water quality to the public on at least a weekly basis. But Ontarians swim in a variety of nearshore areas, including areas not designated as beaches by local health units. MOE does not

appear to require municipalities to alert the public about the suitability of these areas for recreational use. As illustrated by these applications, the public may be unknowingly exposed to degraded water conditions near certain discharge points.

Finally, these applications illustrate that the regulatory oversight of a pollution source can be complex and straddle multiple jurisdictions and ministries (e.g., CNSC and MOE addressing the discharge of uranium into water; MOE, MMAH, and local health units administering Ontario's septic systems). The ECO believes that in such situations, it is imperative that affected regulatory agencies clarify their jurisdictional roles and coordinate mitigation efforts so that environmental protection is not lost in a sea of constitutional and jurisdictional "buck passing."

For ministry comments, please see page 167.

6.3 Mercury: A Pervasive, Persistent Poison

Introduction

In this reporting year, the ECO received three applications related to concerns about mercury contamination. The applications indicate that mercury continues to be an environmental issue in the province. For more information on these applications, see sections 5 and 6 of the Supplement to this Annual Report.

A large source of the mercury found in Ontario's waterbodies, soil and vegetation is the atmospheric deposition of mercury from human activities. Coal-fired power plants are a significant source of mercury emissions. According to the Ministry of the Environment (MOE), annual mercury emissions from Ontario's coal fired power plants dropped from 495 kilograms in 2003, to 191 kilograms in 2008. Mercury is also present in emissions from iron and steel production, incineration, and wood and fuel combustion. It also enters the environment when products containing mercury are disposed of in landfills or in the sewer system.

Mercury is a toxic, persistent and bioaccumulative substance. Bacteria can convert inorganic mercury in water into methylmercury, an organic form of mercury more easily absorbed or ingested by organisms, especially those in aquatic ecosystems. Once in the environment, mercury often accumulates in the sediments of waterbodies or the upper organic layer of terrestrial soils. If it is mobilized from these sinks it can accumulate through the food chain to hazardous levels in predators such as fish and fish eating birds. Human exposure to mercury can adversely affect the nervous system, kidneys, neurological development, skin, cardiovascular system and immune system. In wildlife, mercury can contribute to nervous system damage, and reproductive failure leading to population decline.

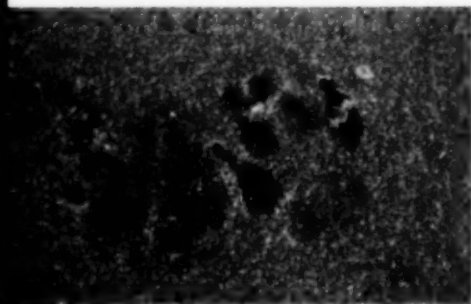
Remediating sediments contaminated by mercury and other pollutants is costly and time intensive. To assist in this regard, the federal and provincial governments recently finalized the Canada-Ontario Decision-Making Framework for the Assessment of Great Lakes Contaminated Sediment. The framework is a risk-based decision-making process that assesses contaminated aquatic ecosystems to determine the nature of the contamination and whether remediation is required. More information on the framework is available in Part 4.7 of this Annual Report, as well as in Section 4.4 of the Supplement to this Report.

Recent Government Initiatives to Minimize Mercury Exposure

The Canadian Council of Ministers of the Environment (CCME) endorsed four Canada-Wide Standards (CWS) aimed at reducing mercury releases. One CWS, finalized in 2000, targeted mercury emissions from base metal smelters and the incineration of sewage sludge and medical, hazardous and municipal waste. Another two CWSs, finalized in 2001, dealt with mercury in waste dental amalgams and fluorescent lamps. Ontario has implementation plans for these CWSs.

In 2005, the CCME accepted the draft CWS on reducing mercury emissions from coal-fired power plants. In June 2006 Ontario's plans for meeting this CWS changed significantly when it announced it was postponing the closure of the province's coal-fired power plants. In October 2006, Ontario signed the CWS, which commits the provinces to reduce mercury emissions from coal-fired power plants by 60 per cent nationally. Ontario did not select a provincial cap but committed to assist in achieving the national capture by 2010.

In February 2008, MOE approved a Municipal Hazardous or Special Waste Program Plan to improve the diversion of hazardous and special waste materials, like mercury, from landfill. The first phase of this program, implemented in July 2008, includes single use dry cell batteries. The second phase, not yet implemented as of May 2009, will include additional mercury-containing products.



In 2007, Ontario passed O. Reg 496/07 (Cessation of Coal Use – Atikokan, Lambton, Nanticoke and Thunder Bay Generating Stations), under the *Environmental Protection Act (EPA)*, committing itself to closing Ontario's coal plants by 2014 (see Section 4.12 of the Supplement to the 2007/2008 Annual Report). In 2008, an amendment to O. Reg 496/07 was proposed that would require Ontario Power Generation to meet an interim cap of 11.5 megatonnes on carbon dioxide (CO₂) emissions from its four coal-fired power plants commencing January 1, 2011, and to report on coal replacement progress quarterly. If achieved, by limiting operations and reducing amount of coal burned, the cap on CO₂ would also serve to reduce mercury emissions.

Delayed Closure of Coal-Fired Power Plants and Mercury Reduction Targets

In October 2006, applicants filed a review of policies related to mercury emissions and other transboundary air issues, triggered by the government's June 2006 decision to indefinitely delay the phase-out of provincial coal-fired power plants. This decision reneged on a 2003 commitment to close Ontario's coal plants by 2007. The province had relied on the coal plant closures to meet the CWS for mercury from coal-fired power generation.

MOE and the Ministry of Energy (ENG) denied the application for review. MOE stated the applicants' concerns were addressed by the 2007 Coal Cessation Regulation and reaffirmed its commitment to the CWS for mercury. ENG stated its commitment to replacing coal-fired power plants with cleaner energy sources and conservation measures:

The ECO is satisfied with the ministries' responses in light of the 2007 Coal Cessation Regulation and

initiatives to lessen reliance on electricity generated by coal-fired power plants. We encourage MOE to continue to address the release of mercury from other sources.

Methylmercury in Ontario's Boreal Forest

In February 2008, applicants requested a review of the need for regulatory and policy reform related to methylmercury in Ontario's boreal forest. The applicants stated the existing guidelines, policies and monitoring regime are inadequate to prevent the contamination and mobilization of methylmercury in the boreal forest. Industrial development in the boreal heightens the probability of methylmercury being released into aquatic environments because flooding or draining peatlands may increase the availability of mercury for bacterial methylation.

MOE, the Ministry of Natural Resources (MNR) and the Ministry of Northern Development and Mines (MNDM) all denied the request for review. MOE stated it had mercury reduction initiatives that addressed the applicants' concerns. MNR asserted that its mandate does not include setting standards for mercury; however, existing laws, regulations, and guidelines addressed concerns related to forest management activities, waterpower projects and wildlife monitoring. MNDM reported that the request was outside its mandate.

The ECO is disappointed with MOE's response and its failure to address the lack of consideration for potential methylmercury release in relation to Permits to Take Water (PTTW), as well as the outdated freshwater quality guideline for mercury. The ECO believes that the reasons put forward by MNR and MNDM for denying the review were reasonable. However, the ECO believes MNR may need to measure mercury levels in boreal forest indicator species, and MNDM should consider the potential for mining projects to mobilize methylmercury in reforming the *Mining Act*.

Possible Mercury Contamination in Brownfields Remediation Site

In April 2008, applicants submitted four applications for investigation relating to a former industrial property in St. Catharines, Ontario. The applicants were concerned about the remediation and redevelopment of the property, and allege that contaminants, including mercury, continue to be discharged into the environment.

MOE agreed to undertake an investigation of whether the Record of Site Condition accurately reflected the environmental conditions at the property, and whether contamination remained at the property at concentrations in contravention of the *EPA* and its regulations.

The ECO believes that MOE's response was appropriate.

ECO Comment

The ECO reiterates its comments from past annual reports that Ontario should significantly reduce the release of mercury into the environment. Given that coal-fired power plants are a significant source of mercury, the ECO is pleased with MOE's commitment to close these plants by 2014, along with the interim target for carbon dioxide emission reductions. Nonetheless, Ontario must address the remaining

sources of mercury, which is critical to ensuring that contamination and health effects are prevented and remediation efforts are not undermined. While the province does not have a comprehensive mercury reduction plan, we note that Ontario has made progress with several initiatives for other sources of mercury, and is working towards the CWS targets for mercury.

The ECO is disappointed that MOE has inadequately responded to concerns that mercury is an inherently toxic substance. In the ECO's 2003/2004 Annual Report, the ECO reviewed an application for investigation related to this issue and questioned MOE's belief that mercury is not inherently toxic. Now five years later, another application raises the same concern, and in its response letter, MOE ignored the issue completely. Given MOE's failure to respond to this concern, the ECO has no choice but to assume that MOE continues to believe that mercury is not inherently toxic. The ECO believes the onus is on MOE to substantiate this position.

In order to assess the efficacy of mercury-reduction initiatives, MOE should make efforts to quantify the mercury being released from different sources and make this information publicly available. With respect to vulnerable wildlife populations, MNR should not wait until a population is in decline before it evaluates mercury as a possible stressor. Instead, mercury levels in indicator species should be measured to assess the overall health of boreal and aquatic ecosystems.

The ECO has concerns about the Provincial Water Quality Objective for mercury, which may be inadequate to protect wildlife and, therefore, should be re-evaluated. Ontario's water quality guideline of 200 nanograms/litre (ng/L) is markedly higher than the guideline of 100 ng/L used by British Columbia, Manitoba and Alberta. It is also considerably higher than the U.S. Environmental Protection Agency's Great Lakes Initiative water quality criterion for the protection of wildlife (1.3 ng/L), and the CCME's water quality guidelines for inorganic mercury (26 ng/L) and methylmercury (4 ng/L).

Lastly, the ECO believes that, where applicable, the potential for methylmercury release should be explicitly considered in MOE's PTTW decisions. While PTTWs generally relate to water quantity, the ECO notes that section 4(2) of O. Reg. 387/04 under the *Ontario Water Resources Act* states that when considering an application for a PTTW, a Director shall consider the potential impact of the water taking on both water quantity and quality. Such consideration was made when MOE amended a PTTW for a diamond mine in northern Ontario to consider and monitor the release of mercury.

For ministry comments, please see pages 167-168.

6.4 MNR's Anti-Poaching Hotline: Is It Working?

In August 2008, two applicants, on behalf of the Ontario Federation of Anglers and Hunters (OFAH), requested a review of the Ministry of Natural Resources (MNR) telephone hotline for the reporting of contraventions of laws administered by the ministry. They also requested a review of MNR's fish and wildlife enforcement policies. The OFAH expressed concerns about: the functioning of the reporting program; MNR's unwillingness to follow-up on provided tips; and, given its limited enforcement capacity, MNR's overall ability to fulfil its mandate of protecting natural resources.

Background

In September 2005, MNR implemented a toll-free, 24/7 telephone hotline, "TIPS-MNR" (1-877-847-7667), through which members of the public can report contraventions of laws administered by MNR directly to the ministry. This service complements, but differs from, the widespread Crime Stoppers program (1-800-222-TIPS), through which callers anonymously report alleged contraventions for a cash reward. During its first year, the TIPS-MNR program received tips on more than 5,000 potential contraventions, leading to 1,410 investigations and 86 convictions. MNR's website notes that while all information provided is valuable and appreciated, the hotline is not an emergency response line, and MNR's Enforcement Branch makes no commitment as to how quickly a Conservation Officer will respond to a tip.

"The audit found that reductions in staff numbers and patrol hours left gaps in MNR's enforcement coverage."

In 2007, the Auditor General of Ontario released the findings of an audit of MNR's fish and wildlife program. The audit found that reductions in staff numbers and patrol hours left gaps in MNR's enforcement coverage. MNR responded

that its funding is focused "on high-priority areas" identified using "risk-based analysis and a landscape or ecosystem approach to managing resources." However, the Auditor General found that for the enforcement units it reviewed, budgeted funds were insufficient to implement enforcement activities according to the units' risk-based plans. For example, the amount of time Conservation Officers spent patrolling during the 2006/2007 fiscal year was 15-60 per cent less than what the units had deemed "necessary to effectively protect natural resources." The audit also found that budgetary constraints affected the effectiveness of the TIPS-MNR program (e.g., by limiting the hours worked by Conservation Officers). In our April 2007 Special Report, "Doing Less with Less," the ECO expressed similar concerns about the adequacy of MNR's enforcement program, noting reductions in the number of field enforcement staff, patrol vehicles, charges laid and convictions made.

The OFAH argued that a review is necessary to ensure that TIPS-MNR is functioning as intended. In support of this request, the application cited a lack of MNR response to several hotline tips, including information on the illegal on-line sale of an invasive species and illegal fishing in sanctuaries. The application also included an MNR response to an OFAH Freedom of Information request pertaining to the TIPS-MNR line. MNR's response indicates that the ministry collects insufficient data to provide accountability to the public on the functioning of the system or allow a performance assessment of the hotline. The OFAH emphasized that reported tips must be responded to quickly in order to catch alleged contraveners, maintain public confidence in the service, and protect Ontario's natural resources.

Given previously identified shortcomings in the ministry's enforcement capacity, including those highlighted in the ECO's Special Report "Doing Less with Less," the OFAH also expressed concern about MNR's general ability to fulfil its mandate. The OFAH strongly suggested a review of MNR's overall enforcement capabilities, stating "it is clear that enforcement is still under funded and understaffed."



Ministry Response

In January 2009, MNR denied the application for review. The ministry's official response was 55 days late and MNR failed to inform the applicants or the ECO of the delay.

In denying the application, MNR stated that the TIPS-MNR reporting line is "solely" a supplementary information tool that "does not manage the environment or resources." The ministry explained that TIPS-MNR is not an emergency response line and MNR's responses to tips vary depending on the quality of information received and the circumstances, such as the potential impact of the contravention, the likelihood of locating the contravener/contravention, and staff availability. MNR further explained that the ministry does not physically attend the scene of every contravention reported and tips are often addressed through other enforcement activities, the results of which are stored "elsewhere." According to MNR, duplicating information gathering for the TIPS-MNR database would not benefit the environment and would reduce an officer's time in the field. Moreover, MNR stated that the intent of the TIPS-MNR line is to relay complaint information to local offices, not to track or link responses to employee activities or resource violations. In light of these facts, the ministry determined that a review was not warranted.



The ministry also declined to review the enforcement part of the application because "enforcement capabilities relate to provincial and internal Ministry budget processes which are not policies, acts, regulations or instruments." In concluding its review decision, MNR provided contact information so the OFAH could meet with ministry staff to discuss their concerns.

ECO Comment

The ECO does not find MNR's rationale for declining this review convincing. Enforcement programs are ministry policies as defined in the *EBR* and are therefore subject to applications for review (see box). Likewise, deeming a program or policy "supplementary" (as MNR did for TIPS-MNR) does not exempt it from *EBR* review.

TIPS-MNR appears to be a useful enforcement tool that has not only led to several convictions but has also improved public awareness and increased support for ministry activities. Nonetheless, the applicants raised some valid concerns about the program – concerns the ministry could have addressed directly by undertaking this review. By reviewing this application, MNR could also have improved public understanding of the need for discretion in handling received tips. While the ECO is pleased that MNR offered to meet with the applicants to discuss their concerns, we are disappointed that MNR failed to complete its review decision on time and, worse still, decided not to notify the applicants of the delay.

The ECO realizes that under a risk-based plan, some TIPS-MNR calls will not be responded to because the alleged contravention did not occur in a high-risk area. Even so, because the introduction of invasive species is a broad-scale issue that threatens biodiversity, the ECO is disturbed by OFAH's claim that MNR did not respond to a tip concerning the alleged illegal sale of an invasive species. Given this and concerns

raised in the ECO and Auditor General's 2007 reports about the effects of funding shortages on MNR's enforcement responses, the ECO encourages MNR to ensure adequate funding for its enforcement programs. Furthermore, the ECO encourages MNR to maintain and strengthen public confidence in TIPS-MNR by regularly publishing transparent, up-to-date summary data on the numbers and types of tips received, a general break-down of how tips were responded to, and overall program outcomes.

Are Enforcement Programs Subject to Applications for Review?

As part of its decision to deny this application, MNR argued that "enforcement capabilities relate to provincial and internal [m]inistry budget processes which are not policies, acts, regulations or instruments." The ECO disagrees with this interpretation.

The *EBR* broadly defines a policy as "a program, plan or objective and includes guidelines or criteria to be used in making decisions about the issuance, amendment or revocation of instruments but does not include an Act, a regulation or an instrument." While the *EBR* does exempt budget-related or predominantly administrative or financial proposals from being posted on the Registry (sections 15 and 33), there is no such exemption for applications for review under the *EBR* (sections 61-73). Further, there are no express restrictions on the ability of the ECO to review ministry budgetary processes and section 58(2)(e) of the *EBR* states that the ECO's Annual Report shall include any information the Commissioner considers appropriate.

The ECO maintains that enforcement and compliance capabilities are indeed ministry policies as defined in the *EBR* and are therefore subject to applications for review. In fact, a number of past reviews under the *EBR* have addressed MNR enforcement and staffing issues, including the role of aggregate inspector workloads in the rehabilitation rates of pits and quarries (see page 139 of the ECO's 2006/2007 Annual Report) and MNR's compliance system for the Ontario forest industry (see page 129 of the ECO's 2003/2004 Annual Report).

For more information, see section 5.4.4 of the Supplement to this Annual Report.

For ministry comments, please see page 168.

6.5 Richmond Landfill Site: Time for Closure

On October 31, 2008, three groups applied under the *EBR*, requesting that the Ministry of the Environment (MOE) consider substantive amendments to the approvals for the Richmond Landfill site (located within the Town of Greater Napanee) to protect the local environment, and public health and safety. They argued that the amendments should:

- prohibit Waste Management of Canada Corporation (WMCC), the owner and operator of the site, from accepting any more waste after December 31, 2008;
- impose site closure and post-closure requirements; and
- require WMCC to implement a monitoring and reporting program to determine the "nature, extent and environmental fate of the leachate plume generated at the site."

Background

Located on thin soils and highly fractured bedrock, the Richmond Landfill site was established in 1954, before approval for such operations was required under the *Environmental Protection Act (EPA)*. Today, the site has five cells, called phases. Phase One was constructed without a liner or a leachate management system. Leachate enters the underlying groundwater where it is diluted. Phases Two through Five were constructed with liners, but according to MOE, they do not meet current standards in O. Reg. 232/98 – Landfilling Sites, made under the *EPA*. Leachate that reaches the edges of Phases Two through Five is collected in perimeter drains.

Local residents, farmers and businesses rely on wells for their drinking water. However, only the top layer of groundwater is potable; the lower layer is naturally saline. Wells cannot be deepened to access new potable water if the top layer becomes contaminated with leachate or salinized.

“Located on thin soils and highly fractured bedrock, the Richmond Landfill site was established in 1954, before approval for such operations was required under the *Environmental Protection Act (EPA)*.”

In November 2006, the Minister of the Environment refused for a number of reasons to approve an environmental assessment (EA) study for a major expansion of the site that would have increased its fill rate to 750,000 tonnes annually from 125,000 tonnes:

- The proponent failed to develop a suitable plan for demonstrating ongoing regulatory compliance;
- The undertaking did not meet regulatory requirements for protecting groundwater and the proponent did not provide a satisfactory explanation for how the proposed expansion would prevent leachate from moving off-site; and
- The environmental effects of the proposed expansion could not be predicted because the impacts of the existing operation were not adequately described in the EA study.

Soon afterward, various groups began urging MOE to prohibit further waste disposal at the site and to require its prompt closure and post-closure care. Instead, MOE asked WMCC to update its groundwater and surface water monitoring plan and, in March 2007, to update its 20-year-old closure plan. MOE was still reviewing the proposed closure plan when this application was submitted to the ECO.

Summary of Issues

According to the applicants, the site poses serious risks to groundwater, particularly salinization and leachate contamination of the top layer of groundwater, and to surface water; and that:

- If the site was capped, the estimated volume of leachate generated annually would drop from 22 million litres to 16 million litres;
- Leachate from up to half of the site is leaking into the underlying groundwater;
- There is evidence that lower saline groundwater is upwelling into the upper fresh groundwater on the site; and
- There is strong evidence that contaminated groundwater and stormwater runoff from the site are flowing into a nearby creek.

Since both MOE and WMCC have stated that there is no evidence of off-site impacts to groundwater and/or surface water, the applicants urged MOE to amend the provisional C of A to require "the development and implementation of a robust on-site and off-site groundwater water monitoring/reporting regime to definitely resolve this dispute."

The applicants also believe that there is no public need to keep the site open. The annual fill rate has fallen from almost 125,000 tonnes annually several years earlier to less than 15,000 tonnes in 2007.

The applicants concluded that the site is "fundamentally unsuitable for waste disposal purposes." Since WMCC has had ample time to prepare a "technically sound closure plan," MOE should amend the site's provisional C of A to force WMCC to address the outstanding issues, such as surface water and groundwater monitoring, rather than leaving it to WMCC's discretion and timeline. (For a more detailed review of this decision, see Section 5.2.21 of the Supplement to this Annual Report.)

Ministry Response

In December 2008, MOE denied the review for two reasons:

1. Closure and post-closure requirements will be imposed in WMCC's closure plan including on-site and off-site surface water and groundwater monitoring and reporting requirements. MOE was already reviewing the submitted Closure Plan and C of A at the time the *EBR* application for review was received.
2. WMCC and MOE have not identified any impacts to off-site groundwater and the existing environmental monitoring program has not provided any evidence of landfill leachate impacts to surface water.

MOE explained that the site is in compliance with its provisional C of A, but that it had recommended changes to the site's environmental monitoring program that would enable MOE to determine if there are off-site impacts to groundwater.

WMCC also commented on the application, explaining that it has 70 groundwater monitoring wells that are sampled on a semi-annual basis and that no impacts to groundwater or surface water have been identified by the existing monitoring program.



Other Information

In our 2005/2006 Annual Report (pages 33-38), the ECO explained that there are two sets of regulatory standards that may apply to landfill sites: Regulation 347 – General Waste Management, made under the *EPA*, and O. Reg. 232/98. In the report, the ECO discussed how MOE has failed to ensure that Cs of A of aging landfill sites, particularly those that were approved prior to the 1998 landfill standards coming into force, reflect the newer standards to the extent possible.

MOE reposted the proposed closure plan on May 1, 2009, in the form of proposed amendments to WMCC's provisional C of A. The proposal replaces the existing surface water, groundwater and landfill gas monitoring program and adds about one hundred new conditions, including conditions related to leachate management and post-closure care. MOE explained that, although WMCC would not be required to close the site immediately, it would be required to comply with its closure plan when the site reached its approved capacity limit. (For additional information, refer to Environmental Registry Number 010-1381.)

ECO Comment

The ECO believes that MOE's decision to deny this application was unjustified. MOE's contention that the "continued operation of the Richmond Landfill in accordance with its Cs of A...does not have [the] potential for harm to the environment" contradicts the expert hydrogeology opinions provided by its own staff and the applicants. Furthermore, MOE has stated that the lack of compelling evidence of contamination is not proof that it has not or will not occur. The ECO does not believe that MOE would have proposed substantive changes to the site's existing provisional C of A if it had been fully protective of the environment, determinative and consistent with O. Reg. 232/98. MOE's own statements and actions undermine its decision to deny this review.

Not only is the geology of the area inherently unsuitable for waste disposal, neither MOE nor WMCC has identified any pressing need or public good for allowing the site to continue to receive wastes. Since the site currently receives only about 10 per cent of its historical volumes of waste, the ECO does not believe that there would be any undue social or economic hardship to the area if the site were closed.

In conclusion, the ECO believes that there are compelling environmental reasons for MOE to require the immediate, orderly closure of the site and no compelling social or economic reasons for continuing to keep it open.

Recommendation 11: The ECO recommends that MOE require the immediate closure of the Richmond Landfill Site.

For ministry comments, please see page 168.

6.6 More Applications of Interest: Caribou, Mining, Community Right to Know and Industrial Vibrations

Space does not permit us to summarize in this section of the Annual Report all the EBR applications for review or investigation that were processed in 2008/2009. Readers are referred to the Supplement for a description of additional EBR applications, including applications that raised the following questions.

Monitoring of Woodland Caribou

Ontario's forest-dwelling population of woodland caribou are regulated as a threatened species under the *Endangered Species Act, 2007*. Does the Ontario government have sufficient measures in place to protect this species at risk? This *EBR* application was submitted in October 2006; MNR committed to release a monitoring program for this species by February 2008, then the ministry postponed the release until June 2009. As of July 2009, MNR still has not gone public with a monitoring program for this iconic species (see Supplement, Section 5.4.1).

Environmental Assessment for Mining Projects

Is Ontario's current system of environmental assessment sufficient for the mineral development process, particularly in the Far North region of the province? Are the ecological impacts of projects assessed in their entirety, from staking to reclamation and remediation, prior to any approvals being granted? MOE denied this *EBR* application and it has recently extended MNDM's deadline to develop a class environmental assessment until December 2012 (see Supplement, Section 5.2.6).

Community Right to Know about Pollutants

Are individuals entitled to information about the chemicals that they are exposed to in their communities, the workplace, and in consumer goods? MOE denied this *EBR* application, but it advised that toxics reduction legislation would make Toxics Reduction Plans, materials accounting information and reports prepared by facilities accessible to the public (see Supplement, Section 5.2.19).

Industrial Vibrations

Are Ontarians adequately protected from the adverse impacts of vibrations both at home and in the workplace? Sounds and vibrations that cause or may cause an adverse effect are regulated under the *Environmental Protection Act*. This *EBR* investigation revealed that MOE policy effectively exempts commercial facilities from provincial noise restrictions because of a limited definition of "points of reception" (see Supplement, Section 6.1.1).



Part 7: The Environmental Registry



The Environmental Registry is the main mechanism for facilitating the public participation provisions of the *Environmental Bill of Rights, 1993 (EBR)*. The Environmental Registry is an Internet site where those ministries subject to the requirements of the *EBR* are required to post notices of environmentally significant proposals, decisions and exceptions related to policies, Acts, regulations and instruments. The public then has the opportunity to comment on a proposal before a decision is made. The ministry must consider these comments in making its final decision and explain how the comments affected that decision. The Environmental Registry also provides a means for the public to obtain information about appeals of instruments, court actions and other information related to ministry decision-making. The Environmental Registry can be accessed at: www.ebr.gov.on.ca.

7.1 Quality of Information

The Environmental Registry is only as good as the information it contains. The *EBR* sets out basic information requirements for notices that ministries post on the Registry. The ministries also have discretion about whether to include other information. Previous annual reports of the Environmental Commissioner of Ontario (ECO) have recommended that in posting information on the Environmental Registry, ministries should use plain language and provide clear information about the purpose of the proposed decision and the context in which it is being considered. Ministries should clearly state how the decision differs from the proposal, if at all, and explain how all comments received were taken into account. All notices should provide a ministry contact name, telephone and fax number, as well as hypertext links to supporting information whenever possible.

The ECO evaluates whether ministries have complied with their obligations under the *EBR* and exercised their discretion appropriately in posting information on the Registry. This ensures that ministries are held accountable for the quality of the information provided in Registry notices.

Comment Periods

The *EBR* requires that ministries provide the public with at least 30 days to submit comments on proposals for environmentally significant decisions. Ministries have the discretion to provide longer comment periods, depending on the complexity and level of public interest in the proposal.

The ECO tracks the number of proposal notices for policies, Acts and regulations that have public comment periods of 45 days or longer. This tracking is one method to broadly examine whether prescribed ministries are exceeding the minimum consultation requirements found in the *EBR*. This tracking also serves to indicate which ministries are making good use of the Environmental Registry through the number of postings that they use for their different initiatives.

Percentage of Proposal Notices for Policies, Acts, and Regulations posted on the Environmental Registry for 45 days or Longer During the 2008/2009 Reporting Period

Ministry	Number of Proposal Notices	Proposals With a 45-day or Longer Comment Period
Agriculture, Food and Rural Affairs	2	100%

Culture	0	n.a.
Energy and Infrastructure*	3	33%
Environment	30	63%
Government Services	0	n.a.
Health and Long-Term Care	4	0%
Labour	0	n.a.
Municipal Affairs and Housing	0	n.a.
Natural Resources	35	80%
Northern Development and Mines	2	0%
Tourism	0	n.a.
Transportation	4	50%

* The Ministry of Energy (ENG) and the Ministry of Public Infrastructure Renewal (PIR) merged to become the Ministry of Energy and Infrastructure (MEI).

Adequate Time to Comment on Acts

It is important that prescribed ministries use the Environmental Registry to thoroughly engage the public when they propose new legislation. Multiple proposals with comment periods as the development of the legislation progresses provide sufficient time for members of the public to understand the rationale and participate.

Lake Simcoe Protection Act, 2008

On March 27, 2008, MOE sought public input on a proposed Lake Simcoe Strategy (which included a proposal to enact a new law) through a notice posted on the Environmental Registry with a 36-day public consultation period. MOE also held three community partner workshops and several focused stakeholder meetings (i.e., with the agriculture sector, Town of Georgina, Simcoe Chapter of Building Industry and Land Development, and the Lake Simcoe Region Conservation Authority).

On June 17, 2008, the *Lake Simcoe Protection Act, 2008* (Bill 99) was introduced for First Reading and posted on the Environmental Registry for a 60-day public consultation period. The review period ended before the bill received Second Reading, giving MOE approximately one month to consider the public comments that had been submitted.

In addition, MOE began an Aboriginal Engagement Strategy in December 2007 that focused on early engagement and outreach activities to support draft legislation. The ministry also created two advisory committees, a Science Advisory Committee and a Stakeholder Advisory Committee.

The ECO is satisfied with MOE's consultation process.

Green Energy and Green Economy Act, 2009

On February 24, 2009, the Ministry of Energy and Infrastructure (MEI) posted a proposal notice with a 30-day public comment period on the Environmental Registry for the *Green Energy and Green Economy Act, 2009* (Bill 150). Designed to encourage the development of renewable energy projects and to increase energy efficiency in the province, the Act also amends 21 other pieces of legislation. The proposal notice included a fairly detailed description of Bill 150, as well as hypertext links to the bill itself and additional information. The ECO is disappointed that MEI did not provide a longer public comment period on the Environmental Registry for such an important piece of legislation.

Description of Proposals

Ministries are required to provide a brief description of each proposal posted on the Registry. The description should clearly explain the nature of the proposed action, the geographical location(s), and the potential impacts on the environment. During this reporting period, descriptions of proposals for policies, Acts and regulations generally met the basic requirements of the *EBR*. The proposal notices provided concise and understandable explanations of the actions the ministries were proposing.

Access to Supporting Information

The majority of proposals for policies, Acts, and regulations posted on the Registry in 2008/2009 provided access to supporting information by listing a contact person, phone number and address. Prescribed ministries appear to be making much better use of "hypertext" links, which are an excellent aid to the public.

Environmental Impacts

The ECO has expressed concern in many previous annual reports that ministries are not adequately explaining the environmental impacts of their proposals. Although the *EBR* does not legally require ministries to include this information, it provides the public with the background necessary to make informed comments on proposals.

Description of the Decision

Once a ministry has made a decision on a proposal posted on the Registry, the *EBR* requires the minister to provide notice of the decision as soon as possible. The description of the decision in a notice lets residents of Ontario know the outcome of the public consultation process. Decision notices that highlight the changes that have been made since the initial proposal was posted are helpful to the public.



Explaining How Public Comments were Addressed

The *EBR* requires the prescribed ministries to explain how public comments were taken into account in making a decision. Ministries should take the time and effort to summarize the comments, state whether the ministry made any changes as a result of each comment or group of related comments, and explain why or why not. Without this description, commenters will not know whether their comments were considered. In situations where there are a large number of comments, ministries should make an effort to summarize them appropriately and describe their effect on the decision.



Summary

The Environmental Registry usually provides the first point of contact for Ontario residents who want to participate in environmental decision-making. The Registry should be as user-friendly as possible. The recommendations contained in this and previous annual reports are intended to improve the quality of information on the Registry and to ensure that the public is able to participate fully in Ontario's environmental decision-making process.

For ministry comments, please see page 169.

7.2 Unposted Proposals and Decisions

Under the *Environmental Bill of Rights, 1993 (EBR)*, prescribed ministries are required to post notices on the Environmental Registry to inform the public of environmentally significant proposals and to solicit public comment. Sometimes ministries fail to meet this legal obligation, and the ECO must make enquiries and report to the public on whether their *EBR* public participation rights have been violated.

During the 2008/2009 reporting period, a number of ministries had instances of non-compliance with the *EBR* notice and comment requirements. For a detailed description of all the unposted proposals and decisions reviewed by the ECO this year, refer to Section 1 of the Supplement to this Annual Report.

The ECO was disappointed this year with the number of instances in which ministries gave notice of environmentally significant proposals and decisions by placing "information notices" on the Environmental Registry, when "regular" proposal notices were required under sections 15, 16 or 22 of the *EBR*. Significant differences exist between regular proposal notices and information notices. For more information about information notices, see Part 7.3 of this Annual Report.

The ECO was also disappointed with the number of instances in which ministries failed to acknowledge or respond to the ECO's enquiries about unposted proposals or decisions within a reasonable period of time or at all. Only in a minority of cases did ministries respond to the ECO's requests for information in a timely fashion, and/or take appropriate action to rectify an unposted or improperly posted proposal or decision to meet their *EBR* transparency and consultation obligations.

Highlighted below are two examples of instances where the ECO made enquiries of ministries about unposted proposals and decisions during the 2008/2009 reporting year.

For ministry comments, please see page 169.

MNR's Identification and Confirmation Procedure for Areas of Natural and Scientific Interest

On September 19, 2008, the Ministry of Natural Resources (MNR) posted an information notice on the Environmental Registry about the ministry's updated Identification and Confirmation Procedure for Areas of Natural and Scientific Interest (ANSIs).

ANSIs are areas of land and water in Ontario that MNR designates as having significant geological and/or biological features. ANSIs are an important way for MNR to identify areas that have significant value for natural heritage protection, scientific study and education purposes.

The procedure document sets out the ministry's procedure for identifying and confirming the status and boundaries of ANSIs. The ECO informed MOE that this procedure document is subject to the regular notice and comment provisions of the *EBR* when MNR posted an information notice on the Environmental Registry for an earlier (April 2000) version of the document. The ECO drew attention to this inappropriate use of an information notice in our 2000/2001 Annual Report. MNR's use of an information notice again in 2008 perpetuates this denial of the public's right under the *EBR* to comment on an environmentally significant policy.

Responding to the ECO's enquiry, MNR staff met with ECO staff in February 2009. MNR explained that it believed that an information notice was appropriate, as the revised procedure did not change policy direction but simply incorporated existing practice into the procedure document. MNR also stated that the document was largely science (not policy) and, therefore, did not merit public consultation.

The ECO disagrees that the revised ANSI procedure does not contain new policy. The revisions to the procedure set out selection criteria to be used to evaluate candidate ANSIs – criteria that were not included in the previous version. Further, the ECO is concerned about MNR's position that it need not consult on this procedure document because it is primarily "scientific." The *EBR* does not make this distinction.

The ECO was, therefore, pleased to receive a letter from MNR in May 2009 stating that the ministry would be re-posting the procedure document as a regular policy proposal. However, as of late July 2009, MNR had not re-posted the notice.



Environmentally Significant Legislative Amendments by MTO

In this reporting year, the Ministry of Transportation (MTO) introduced two bills in the Ontario Legislature that were environmentally significant. In both cases, MTO initially failed to post notice of the bills on the Environmental Registry. However, once the ECO reminded MTO of its *EBR* obligations, MTO acted in both instances to remedy the problem.

Bill 118, Countering Distracted Driving and Promoting Green Transportation Act, 2008

Bill 118 was introduced for First Reading on October 28, 2008, and received Royal Assent on April 23, 2009. In part, the Act amends the *Public Vehicles Act* to facilitate the use of car pooling in Ontario, which is intended to help reduce harmful emissions, ease traffic congestion and fight climate change.

In response to an ECO enquiry letter, MTO belatedly posted an Act proposal notice on the Environmental Registry on December 23, 2008 for a 30-day comment period. MTO also responded to the ECO in a letter dated March 9, 2009, apologizing for the delay in posting a notice.

Bill 163, Greater Toronto and Hamilton Area Transit Implementation Act, 2009

Bill 163 received First Reading on March 30, 2009, and received Royal Assent on May 14, 2009. The bill amends the *Greater Toronto Transportation Authority Act, 2006* to facilitate the implementation of the Regional Transportation Plan (RTP) for the Greater Toronto and Hamilton Area. According to the Minister of Transportation, "these projects would mean reducing congestion and greenhouse gas emissions to protect the environment and improve the quality of life for our families and communities."

On April 3, 2009, the ECO contacted ministry staff to enquire whether MTO would be posting a notice for the bill. On April 10, 2009, ministry staff advised the ECO that MTO would be posting an information notice. MTO stated that it had already consulted the public on the draft RTP through various notices on the Environmental Registry. MTO noted that the bill would be proceeding to Standing Committee on April 22, 2009, and so a full 30-day public comment period as required by the *EBR* would not be possible before the bill was beyond the amendment stage.

"The ECO has consistently taken the position that a ministry should provide a new public comment period when an environmentally significant bill is introduced for First Reading, even where there has been earlier consultation on the policy underlying the proposed legislation."

The ECO advised ministry staff that it would be inappropriate to use an information notice for Bill 163, as the ministry is required to provide regular notice of proposed Acts under section 15 of the *EBR*. The ECO has consistently taken the position that a ministry should provide a new public comment period when an environmentally significant bill is introduced for First Reading, even where there has been earlier consultation on the policy underlying the proposed legislation. The ECO reminded MTO staff of the ECO's position that if the legislative timetable does not allow for a full 30-day comment period, a consultation period of less than 30 days is acceptable and certainly preferable to no public comment period at all.

On April 20, 2009, MTO posted a policy proposal notice for Bill 163 on the Environmental Registry, and on April 21, MTO re-posted the notice correctly as an Act proposal notice. MTO wrote to the ECO on May 6, 2009 to confirm that it had posted a proposal notice.

It is unfortunate that MTO did not initially comply with the *EBR* requirements to give notice and consult on environmentally significant legislation, and that it took MTO over two weeks after first being contacted by the ECO to post a notice, given the very short timeframe available for meaningful public consultation on Bill 163. Had a notice been posted on March 30, 2009 when the bill received First Reading, the public would have had a longer opportunity to comment while there was still time to make amendments to the bill. Posting proposals promptly is better for all concerned.

Nevertheless, the ECO is pleased that, in both cases, MTO complied with the ECO's requests and posted regular notices on the Environmental Registry. MTO staff were responsive to the ECO's communications and were receptive to the ECO's suggestions for resolving the issues. MTO should be commended for its efforts to address the ECO's concerns.

For ministry comments, please see page 169.

7.3 Information Notices

In cases where provincial ministries are not required to post a proposal notice on the Environmental Registry for public comment, they may still provide a public service by posting an "information notice" under section 6 of the *Environmental Bill of Rights, 1993 (EBR)*. These notices keep Ontarians informed of important environmental developments.

Ministries should use an information notice only when they are not required to post a regular notice for public comment (under sections 15, 16 or 22 of the *EBR*). Significant differences exist between regular proposal notices posted on the Registry and information notices. With regular proposal notices, a ministry is required to consider public comments and to post a decision notice that explains the effect of such comments on the ministry's final decision. The ECO then reviews the extent to which the minister considered those comments when he or she made the final decision. A ministry must also consider its Statement of Environmental Values in the decision-making process. Third-party appeal rights are only available for instruments if they are posted as regular proposal notices. This approach provides greater public accountability and transparency than simply posting an information notice.

The ECO encourages all prescribed ministries, particularly MOE and MNR, to clearly articulate the rationale for invoking the exemption from formal public comments in each information notice posted on the Environmental Registry. For example, it may be appropriate to post an information notice to explain administrative changes (that do not amend policies or programs in an environmentally significant manner), or to announce the release of a report written by a third party.

In the 2008/2009 reporting period, the ECO notes that many ministries merely re-stated the purpose of the information notice in the "rationale for exemption" section of the notice, rather than providing an explanation for the exemption from the public comment requirements under the *EBR*. By clearly articulating the rationale for the exemption, ministries will avoid any confusion on the part of the public or the ECO as to whether an information notice was a legitimate interpretation of the intent of the *EBR*.

The ECO reviews whether or not ministries use information notices appropriately and considers whether notices are clear and complete. Refer to Section 2 in the Supplement to this Annual Report for a discussion of the appropriate use of information notices and for a complete description of each information notice posted on the Registry in 2008/2009.

During the 2008/2009 reporting year, 12 ministries posted a total of 114 information notices. However, for the purposes of tracking year-to-year trends, the ECO does not double-count repostings of previous initiatives (as ministries often post updates on information notices), or notices that relate to Forest Management Plans. In 2008/2009, the ECO excluded 24 updates to existing notices, and 14 notices relating to Forest Management Plans. Accordingly, for ECO tracking purposes, the ministries posted 76 information notices in 2008/2009. The ECO recognizes that both MOE and MNR voluntarily post more information notices on the Registry than any other ministry to inform the public of environmentally significant matters not prescribed under the *EBR*.

Ministry	Number of Information Postings
Energy (ENG) ¹	1
Energy and Infrastructure (MEI) ¹	1
Environment (MOE)	32
Government Services (MGS)	1
Health and Long-Term Care (MOHLTC)	1
Health Promotion (MHP)	2
Labour (MOL)	1
Municipal Affairs and Housing (MMAH)	2
Natural Resources (MNR)	24
Northern Development and Mines (MNDM)	4
Public Infrastructure Renewal (PIR) ¹	3
Transportation (MTO)	4

¹In June 2008, the Ministry of Energy (ENG) and the Ministry of Public Infrastructure Renewal (PIR) were merged to become the Ministry of Energy and Infrastructure (MEI).

Proper Use of Information Notices

Several ministries used information notices during the 2008/2009 reporting period to inform the public about initiatives that are legally exempted from the requirement to post regular proposal and decision notices. For example, MNR posted several notices informing the public about reports that were not prescribed for posting under the *EBR*, including the State of the Forest Report, 2006 and the Interim Report on Ontario's Biodiversity 2008. In addition, MOE made proper use of an information notice to advise the public of the publication of the Wind Turbine Facilities Noise Issues report.

In July 2008, MOE posted a notice informing the public of new individual accreditation agreements with the Standards Council of Canada (SCC) and the Canadian Association for Environmental Analytical Laboratories (CAEAL) for accrediting drinking water testing laboratories. MOE stated that the new agreements will replace the tripartite agreement between MOE, SCC and CAEAL that was established in 2003 and expired on July 31, 2008. The Minister of the Environment is required under the *Safe Drinking Water Act, 2002* to designate an accrediting body (or bodies) for drinking water testing laboratories. The ECO believes this is an appropriate use of an information notice.

Inappropriate Use of Information Notices

On several occasions during the 2008/2009 reporting period, ministries used information notices inappropriately, stating that the initiatives were not "policy decisions" for a variety of reasons. For example, MNR should have posted a regular proposal notice for its Ontario Moose Program Review – Phase 1: Information Package and Questionnaire. MNR advised the ECO that the information notice was intended to invite the public "to share their ideas on how they think the Ministry should manage moose populations today and into the future." MNR staff noted that MNR intended "to use the input (together with that from other meetings/sessions with other interested people/stakeholders and Aboriginal people) to help inform the development of any new policy proposals/changes to the moose management program." MNR staff stated that any proposed policy changes will be posted on the Environmental Registry as policy proposal notices inviting public comment. However, the ECO believes that the information notice contained an environmentally significant policy proposal. (For further details on this notice, see Section 1.2.1 on "Unposted Decisions" in the Supplement to this Annual Report.)



MOE should have posted a regular proposal notice for its extension of two Ministry of Northern Development and Mine Declaration Orders issued under the *Environmental Assessment Act (EAA)*. The ECO believes it was inappropriate for MOE to use an information notice to solicit public comments, as the *EBR* identifies these specific Declaration Orders as regulations for the purposes of the *EBR*. (For further details on these notices, see Section 1.1.1 on "Unposted Decisions" in the Supplement to this Annual Report.)

Ministry Decisions that are Not Prescribed

In 2008/2009, a number of ministries voluntarily posted information notices to inform the public of environmentally significant decisions made by ministries or under Acts, regulations or instruments that are not prescribed under the *EBR*. For example, MNR posted four information notices for proposed permits issued under the *Endangered Species Act, 2007 (ESA)*. These permits are not yet classified as instruments under the *EBR*, however, on March 26, 2009, MNR posted an information notice indicating that it proposes to classify these permits as instruments under the *EBR*. (For further details on this notice, see Section 1.1.2 on "Unposted Decisions" in the Supplement to this Annual Report). In February 2009, the ECO released a Special Report, "The Last Line of Defence: A Review of Ontario's New Protections for Species at Risk."

that recommended “all instruments that may be issued pursuant to the *ESA* and its regulations be prescribed under the [*EBR*].” In addition, the ECO requested that MNR post information notices for all instruments issued under the *ESA* until these instruments are prescribed under the *EBR*.

The ECO encourages ministries to post information notices for environmentally significant proposals and decisions that are not prescribed. However, the ECO continues to urge the government to prescribe new government laws and initiatives that are environmentally significant under the *EBR* within one year of implementation to ensure that environmentally significant decisions are appropriately posted. (For more information please see Part 8.1 of this Annual Report and Section 11 of the Supplement to this Annual Report for a more detailed discussion of the issue of prescribing ministries and Acts under the *EBR*).

For ministry comments, please see page 169.

7.4 Exception Notices

In certain situations, the *Environmental Bill of Rights, 1993 (EBR)* relieves prescribed Ontario ministries of their obligation to post environmentally significant proposals on the Environmental Registry for public comment.

There are two main situations in which ministries can post an “exception” notice to inform the public of a decision and explain why it was not posted for public comment. First, ministries are able to post an exception notice under section 29 of the *EBR* when the delay associated with soliciting public comment would result in danger to public health or safety, harm or serious risk to the environment, or injury or damage to property. This is the “emergency” exception. Second, ministries can post an environmentally significant proposal as an exception notice under section 30 of the *EBR* when the proposal will be or has already been considered in another public participation process that is substantially equivalent to the requirements of the *EBR*. This is the “equivalent public participation” exception.

During the 2008/2009 reporting year, two exception notices were posted on the Environmental Registry by the Ministry of the Environment (MOE). In both cases, MOE invoked the “equivalent public participation” exception. The ECO believes that both notices were acceptable uses of the exception provisions provided in the *EBR*.

No other ministries used exception notices during the 2008/2009 reporting year.

The ECO is pleased, that all ministries reduced their reliance on exception notices during this reporting year as compared to past years.

MOE’s use of the “equivalent public participation” exception

In January 2009, MOE posted an exception notice on the Environmental Registry relating to the renewal of a Permit to Take Water (PTTW) issued to De Beers Canada Inc. for the extraction of potable water for its Victor Diamond Mine. MOE stated that a number of environmental assessments have been completed for this project, including assessment under the *Canadian Environmental Assessment Act (CEAA)*. The ECO believes that the use of an exception notice for the current PTTW renewal is acceptable since the supply of potable water was considered and consulted on under the *CEAA* process.

On March 31, 2009, MOE posted an exception notice on the Registry related to a one-year extension of a regulation under the *Ontario Water Resources Act (OWRA)* for the protection of Lake Simcoe (O. Reg. 60/08). MOE stated that "the extension of O. Reg. 60/08 to March 31, 2010, would allow for the development of long-term phosphorus caps for sewage treatment plants and a comprehensive Phosphorus Reduction Strategy." MOE stated that a substantially equivalent public participation process had been undertaken; an opportunity to comment on the extension of the regulation had been provided when the Lake Simcoe Protection Plan proposal was posted on the Environmental Registry in March 2008. The ECO believes that MOE's use of an exception notice for the one-year extension of the Lake Simcoe Protection Regulation was acceptable. The ECO encourages MOE to use the Environmental Registry appropriately during the development of the Phosphorus Reduction Strategy.

7.5 Late Decision Notices and Undecided Proposals

When ministries post notices of environmentally significant proposals for policies, Acts, regulations or instruments on the Environmental Registry, they must undertake to post notices of their decisions on those proposals, along with explanations of the effect of public comment on their final decisions. But sometimes ministries either fail to post decision notices promptly or do not provide the public with updates on the status of older, as yet undecided proposals. In those cases, neither the public nor the ECO is able to tell whether the ministry is still actively considering the proposal, has decided to drop the proposal, or has implemented a decision based on the proposal while failing to post a decision notice. This reduces the effectiveness of the Environmental Registry, and may make members of the public reluctant to rely on it as an accurate source of information.

The ECO periodically makes inquiries to ministries on the status of proposals that have been on the Environmental Registry for more than a year and suggests they post either updates or decision notices. Below is a very small sampling of the many proposals for policies, Acts, regulations, and instruments posted before March 31, 2008, and still outstanding on the Registry as of April 1, 2009.

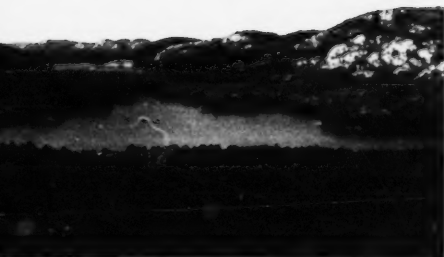
Ministry	Title	Proposal Date
Municipal Affairs and Housing	Proposed consultation on components of land use Planning Reforms in Ontario	June 3, 2004
Transportation	Class Environmental Assessment for Provincial Transportation Facilities	January 7, 1998
Northern Development and Mines	Self-Regulation of Ontario Geoscientists	March 7, 2000
Environment	Lake Superior Lakewide Management Plan – Stage 2: Load Reduction Targets	October 25, 1996
Agriculture, Food and Rural Affairs	Intensive Agricultural Operations in Rural Ontario	July 13, 2000
Natural Resources	Fish-Community Objectives for the St. Lawrence River	July 18, 2000

The Importance of Posting Decision Notices when the Government Makes a Decision

On March 27, 2008, MOE posted the proposed "Protecting Lake Simcoe: Creating Ontario's Strategy for Action" discussion paper – an "overall game plan for protecting Lake Simcoe" – on the Environmental Registry. Less than three months later, the *Lake Simcoe Protection Act, 2008* (Bill 99) received First Reading, and MOE posted the proposal notice on the Environmental Registry. The Act received Royal Assent on December 10, 2008.

On June 18, 2009, MOE posted nearly identical decision notices for the Lake Simcoe strategy and the Act. The decision notice for the Act was published seven months after the legislation received Royal Assent. As for the strategy, one can only assume it was finalized when MOE introduced the Act in the legislature. Given this assumption, MOE delayed posting a Lake Simcoe strategy policy decision notice for one year. MOE should have posted a policy decision notice on the Environmental Registry for the strategy, clearly outlining what it entailed, either prior to or concurrent with the introduction of the Act. Without a decision notice, the public has no idea how public comments were considered in reaching a final decision. Failing to post decision notices in a timely manner undermines the utility and value of the Environmental Registry as a source of current information for Ontarians.

For ministry comments, please see page 170.



A black and white photograph. In the upper portion, two hands are positioned to form a heart shape. The hands are light-colored against a bright, overexposed sky. Below the hands, the landscape is visible. It features a body of water, possibly a pond or a slow-moving stream, which reflects the light from the sky. The water is surrounded by tall, dense grasses or reeds. In the background, a dark, silhouetted line of trees stretches across the horizon. The overall composition is peaceful and evocative.

Part 8: Ministry Progress

Part 8 of the ECO Annual Report covers the progress made on two fronts by ministries prescribed under the *EBR* and by the provincial government. The ECO follows up every year on the progress made by these ministries in implementing ECO recommendations contained in previous Annual Reports. This section also includes a summary of the advancement made by the province in prescribing ministries, new laws, and ministry processes under the *EBR*.

8.1 Keeping the *EBR* in Sync with New Laws and Government Initiatives

As regular readers of ECO Annual Reports know, a major challenge facing the Ontario government and the ECO is to keep the *EBR* "in sync" with new laws and government initiatives, including the creation of new ministries. The ECO strives to ensure that the *EBR* remains up-to-date and relevant to Ontario residents who want to participate in environmental decision-making. The Commissioner and his staff constantly track legal and policy developments at the prescribed ministries and in the Ontario government as a whole, and encourage ministries to update the *EBR* regulations to include new laws and prescribe new government initiatives that are environmentally significant.

"There continue to be serious delays in making certain ministries, laws and instruments subject to the *EBR*..."

In our 2004/2005 Annual Report, the ECO outlined some of the reasons why it is necessary to constantly update the *EBR* regulations and recommended that new, environmentally significant government laws and related initiatives be prescribed under the *EBR* within one year of implementation. We have followed up on this recommendation in our 2008/2009 Annual Report and other recent annual reports. More detail is provided in the Status Report in Section 11 of the Supplement to this Annual Report.

There continue to be serious delays in making certain ministries, laws and instruments subject to the *EBR*, as summarized in Table 1. For example, the six-year delay in prescribing Water Management Plans (WMPs) issued under section 23.1 of the *Lakes and Rivers Improvement Act (LRIA)* as instruments under O. Reg. 681/94 (Classification of Proposals for Instruments) has deprived residents of Environmental Registry notice and comment opportunities and has frustrated the intent and spirit of the *EBR*. The ECO is concerned about these lengthy delays; they deprive the public of their rights to participate in environmentally significant decisions, to ensure that Statements of Environmental Values (SEVs) are considered, to file leave to appeal applications, and to request *EBR* investigations and reviews. Moreover, the ECO is not legally empowered to subject ministry decision-making under these non-prescribed Acts to the same degree of scrutiny as would normally occur for decisions made under prescribed Acts and regulations.

In the 2008/2009 reporting period the ECO observed some progress in expanding *EBR* coverage. In June 2008, MNR, MOHLTC and MOE completed work on prescribing the *Kawartha Highlands Signature Site Parks Act, 2003 (KHSSPA)*, the *Endangered Species Act, 2007 (ESA)*, the *Provincial Parks and Conservation Reserves Act, 2006*, and some parts of the *Health Protection and Promotion Act (HPPA)*. In addition, the federal *Fisheries Act* was removed as a prescribed Act because MNR's role was changed. (For background, see the ECO's 2007/2008 Annual Report at pp. 106-111.) The ECO commends the ministries for completing this work.

More progress is expected in the 2009/2010 reporting period. In early June 2009, MOE posted a proposal (Environmental Registry Number 010-6516) that included a package of amendments to O. Reg. 73/94. In the package MOE has proposed to prescribe the *Green Energy Act, 2009* and the *Ontario Heritage Act*.

however, a number of additional updates and needed changes, as described in Table 1, apparently will remain unaddressed.

For example, the ECO's 2005/2006 Annual Report recommended that Ministry of Municipal Affairs and Housing (MMAH) and MOE fully prescribe the *Building Code Act, 1992* under the *EBR* for regulation-making and instrument proposal notices and applications for reviews. In March 2007 and again in March 2009, MMAH and MOE advised the ECO that MMAH has no plan to implement the ECO recommendation on prescribing the *Building Code Act, 1992*. This is an unfortunate decision and it means that transparency and accountability for MMAH policy-making and law-making on green building materials and energy technologies will be reduced. The ECO urges MMAH to reconsider its approach given the growing public concern about issues such as climate change.

There have been many applications for review made by the public to make certain ministries subject to the *EBR* or to expand the number of *EBR* processes that apply to a prescribed ministry. In our 2006/2007 Annual Report, the ECO reported that the ministries appeared to be growing more receptive to requests for review submitted by members of the public under the *EBR* to prescribe Acts and ministries. This trend has continued in the past two reporting periods. In June 2008, MOE and the Ministry of Transportation (MTO) prescribed MTO for reviews under the *EBR*, implementing a 2003 request made by two Ontario residents in an *EBR* application for review. Given the key role that MTO plays in formulating policies related to public transportation and sound urban development, this is a very positive development and will allow the public to file applications for review related to the work of MTO.

Despite the lack of progress in 2008/2009 on prescribing certain ministries, there are positive signs that some of the issues may be resolved in 2009/2010. In June 2009, MOE posted proposed amendments prescribing the Ministry of Energy and Infrastructure (MEI) and making the Ministry of Consumer Services (MCS) subject to the *EBR*. The proposed regulation also deals with some housekeeping matters such as revising the names of ministries listed in O. Reg. 73/94. More detail is provided in Section 11 of the Supplement to this Annual Report.

Table 1: Gaps in *EBR* coverage

Ministries that should be prescribed under the *EBR*

- Ministry of Aboriginal Affairs
- Ministry of Education
- Ministry of Energy and Infrastructure (in progress)
- Ministry of Health Promotion
- Ministry of Consumer Services (in progress)

Laws that should be prescribed under the *EBR*

- *Building Code Act, 1992* (MMAH)
- *Food Safety and Quality Act, 2001* (OMAFRA)
- *Lake Simcoe Protection Act, 2008* (MOE)
- *Ontario Heritage Act* (MCL) (in progress)

Instruments that should be prescribed under the *EBR*

- Water Management Plans (MNR)

For ministry comments, please see page 170.

8.2 Ministry Statements of Environmental Values: One Step Forward ...

Introduction

The Environmental Bill of Rights, 1993 (EBR) requires that each prescribed ministry develop a Statement of Environmental Values (SEV). The SEV is a statement that guides the ministry when it makes decisions that might affect the environment. The ministry must consider its SEV when it makes an environmentally significant decision. In addition, the minister must consider the SEV when deciding to conduct a review or investigation under the *EBR*.

The Original SEVs

Since the creation of the first SEVs in 1994, the ECO has been concerned that these documents have neither measured up to the intent of the original *EBR* Task Force, nor to the public's expectations. The main concerns have been: that the SEVs are too vaguely worded, that they are not sufficiently integrated with ministry mandates, and that they are not consistently designed or applied by prescribed ministries. Most of the 1994 SEVs provided mission statements that did not mention the environment or sustainability. In addition, most ministries did not specifically state which aspects of their mandate might generate decisions with significant environmental implications. These documents tended to be a combination of "boilerplate" text from the *EBR*, motherhood statements regarding the importance of the environment, and general statements of intent. The most significant exceptions were the ministries with the most obvious environmental components in their mandates, namely the (then combined) Ministry of the Environment and Energy and the Ministry of Natural Resources (MNR).

A few others, such as the former Ministries of Municipal Affairs, Health, and Housing, listed the areas within their mandates where *EBR*-eligible decisions were most likely, providing evidence that serious thought had been put into the process. While a few ministries also provided sets of environmental principles, none provided good descriptions of how the principles would be applied and integrated in decision-making. This was a key failing, as these "how" statements are required by legislation and imply the identification of specific mechanisms. Without this information, there is no way to judge whether or not the *EBR* purposes would be considered as part of the normal decision-making process, rather than after the fact.



In response to the ECO's concerns and in recognition of the fact that the 1994 SEVs had become outdated, the Ministry of the Environment (MOE) announced in 2002 that it would lead a ministry-wide process to review and renew the SEVs. The ECO described this in our 2002/2003 Annual Report as a three-part process to: first, revise all the SEVs; second, develop a process to ensure consistent application; and third, start and maintain an interministry discussion on long-term reform of SEVs. The revised SEVs were to be posted in 2003 for review in the 2003/2004 Annual Report. This review process in fact took six

years. The delays were due to a number of factors, including personnel changes at MOE and a change in government. In July 2005, 11 ministries posted proposals for revised SEVs on the Environmental Registry:

- Ministry of Agriculture, Food and Rural Affairs
- Ministry of Culture
- Ministry of Economic Development
- Ministry of the Environment
- Ministry of Health and Long-Term Care
- Ministry of Labour
- Ministry of Municipal Affairs and Housing
- Ministry of Natural Resources
- Ministry of Northern Development and Mines
- Ministry of Tourism
- Ministry of Transportation

A decision was made and the final documents were posted in October 2008 (see Environmental Registry Number PA05E0016 to view the final SEVs). The decision notice indicates that two recently restructured ministries (the Ministry of Government Services and the Ministry of Energy and Infrastructure) are undertaking reviews of their SEVs and will be posting proposals for revised SEVs in the future.

SEV Requirements: A Basis for Assessment

What should be in a SEV? The introductions to each of the 2008 SEVs state that the SEV should be a means for the ministry:

1. To record its commitment to the environment, and
2. To be accountable for ensuring consideration of the environment in its decisions.

The ECO interprets the first point to mean that the SEV is a legally required policy statement recording each ministry's commitment to its environmental values, which should ideally be expressed as principles derived from the *EBR* purposes but specific to each ministry's mandate.

The second point, that the SEV should make the ministry accountable, implies that the stated commitment is clear, definitive and in sufficient detail that a future neutral assessor (in this case, the Environmental Commissioner) can judge whether or not consideration was given to the principles.

To further advance the accountability goal, the *EBR* explains that a SEV should include "how the purposes of the *EBR* are to be applied when decisions that might significantly affect the environment are made in the Ministry."

This requirement implies that a ministry includes in its SEV a brief description of a process and/or mechanism for how the application will be carried out. This can be at a high level, but it should be clear and well-defined. For example, the SEV could include the following elements:



- 1 A list of areas/activities/functions within the ministry that are recognized as likely to have environmental impacts;
- 2 An indication that the ministry has created an evaluation process for determining if a ministry initiative should be subject to the SEV; and
- 3 A commitment to an on-going training program for sufficient numbers of staff to ensure that every activity identified will have the expertise available to assist in the application of the SEV.

The SEV need not provide detail on the evaluation process or the training program; the commitment to these or similar mechanisms would be sufficient for accountability.

The *EBR* also states that a SEV should explain "how consideration of the purposes of the *EBR* should be integrated with other considerations, including social, economic and scientific considerations, that are part of decision-making in the Ministry."

The ECO interprets this as a requirement to commit to a process whereby the minister and his or her delegated staff discuss and evaluate the implications of the SEV at the same time other factors are reviewed. The SEV should not be considered as an afterthought to be considered after the proposal has already been developed. This means that the process should include SEV consideration at the early planning stages and that such consideration should be documented as an on-going part of the planning. Areas where SEV considerations complement other considerations, or where they could act as a constraint on same, should be documented, along with the analysis and conclusions that support the final decision. These two commitments – timing and on-going documentation – ensure that the *EBR* purposes are considered from the beginning of the development of any proposal and that the ministry can be held accountable for these requirements.

Assessing the New SEVs

The process of SEV renewal led by MOE (2002-2008) has resulted in a practical solution to the old problem of a lack of consistency across ministries: the adoption of a standard format. Each of the 11 revised SEVs contains separate sections that cover the following subjects:

- 1 An introduction;
- 2 The ministry's vision, mission, mandate and business;
- 3 Application of the SEV;
- 4 Integration with other considerations;
- 5 Monitoring use of the SEV;
- 6 Consultation;
- 7 Consideration of Aboriginal people; and
- 8 Greening of internal operations.

The eight formal categories in the new SEVs are intended to capture the mandate of each ministry and the requirements of the *EBR*, as well as to highlight specifically the role of Aboriginal people and the goal of internal ministry greening.

The ECO supports the new format, which brings consistency to the SEVs. Furthermore, it is ideal for describing the SEV elements that the ECO has identified as essential, namely:

- Ministry-specific *EBR*-based principles;
- Application mechanisms, such as *EBR*-significant areas within a ministry mandate, evaluation processes (SEV triggers), and *EBR* training programs (SEV capacity building to improve the SEV consideration and documentation processes); and
- Integration mechanisms, such as process-timing commitments and SEV documentation processes.

Accordingly, the ECO has assessed the new SEVs using these criteria and the results are as follows.

Three SEVs Close to Completion

Although none of the 2008 SEVs had all of the desired components, three ministries produced better-than-average SEVs that contain many of the above-listed essential elements.

Ministry of the Environment (MOE)

MOE's SEV contains a comprehensive set of principles and a full description of the areas of its mandate to which these are regularly applied. No mention is made of a SEV evaluation process, but in MOE's case this is probably not necessary, as all of its work is *EBR*-related. The SEV lacks a commitment to *EBR* training and timing, but does refer to the necessary documentation process.



Ministry of Natural Resources (MNR)

MNR's SEV also contains a full set of MNR-specific principles and a discussion of the relevant areas of its mandate. The SEV also discusses the capacity issue (training and training tools for staff) and commits to an appropriate documentation process. No evaluation process is mentioned but, as with MOE, the nature of MNR's mandate makes this less necessary. The timing commitment (how soon the SEV is applied in the planning process) could be strengthened in this SEV.

Ministry of Municipal Affairs and Housing (MMAH)

The MMAH SEV sets out an *EBR*-related principle for each specific area of its mandate. It also commits to the appropriate timing and monitoring of its SEV considerations. It does not mention an evaluation mechanism, but the specificity of the principles and identification of mandate areas of concern lessens the importance of such a mechanism. The biggest weakness of this SEV is that training is not mentioned.

Incomplete SEVs with Well-Defined Principles

Two SEVs contained good relevant sets of principles but only made very general statements of intent with regard to their application and integration.

Ministry of Transportation (MTO)

MTO's SEV defines *EBR*-related principles as they relate to well-defined areas of environmental concern within its mandate. These are well elucidated and useful as SEV elements. Unfortunately, the SEV does not elaborate beyond a general comment as to how the application and integration will take place.

Ministry of Northern Development and Mines (MNDM)

MNDM's SEV sets out the areas of its mandate where the SEV might apply and, like MTO, defines principles that are almost mandate-specific, non-quantitative objectives. Also as with MTO, this SEV only makes general statements regarding the mechanisms of application and integration.

Incomplete SEVs

Ontario Ministry of Agriculture and Rural Affairs (OMAFRA) and Ministry of Health and Long-Term Care (MOHLTC)

The SEVs produced by OMAFRA and MOHLTC contain no ministry-specific principles and lack adequate analysis of potential areas of concern within their mandates. OMAFRA's SEV does mention that all projects designated as SEV-eligible will go to the Policy Committee and the Senior Management Committee, both chaired by the Deputy Minister, and that these committees will provide guidance. MOHLTC's SEV commits the ministry to making a declaration regarding the presence or absence of significant environmental effect on all policies, directives, guidelines, strategies and advice before approval and implementation. The ECO would prefer to see a commitment to this kind of analysis earlier on in the decision-making process.

SEVs with No *EBR*-Relevant Detail

Ministries of Labour (MOL), Culture (MOC), Economic Development (MED) and Tourism (MTOUR)

The SEVs of these ministries offer little more than descriptions of their respective mandates (with limited or no mention of the environment) and generalized statements of intent worded simply to accommodate the requirements of the *EBR*. In addition, the Ministry of Economic Development's commitment to support green industry in its 1994 SEV has been removed – a notable omission at a time when most governments are stressing the vital economic and environmental importance of this emerging sector.

ECO Comment

The history of the SEVs has been mixed. The original intent of these provisions in Part II of the *EBR* was to promote the integration of environmental thinking with the basic planning process within ministries. As

mentioned earlier, however, the original SEVs were generally seen as too vague, not integrated with ministry mandates, and inconsistently designed and applied.

The SEV-renewal process led by MOE took approximately six years to generate modest progress. The new format is an improvement and a step forward. The inclusion of specific references to consultation, Aboriginal considerations and the greening of internal ministry operations may prove beneficial, and the ministry-specific principles and areas of concern presented by a few ministries have moved the SEV concept in the right direction. In terms of the original intent of the SEVs, however, the achievement record is very weak.

The ECO suggests that MOE, as promised, re-start the SEV-renewal process as soon as possible, with the aim of posting a full set of new SEVs on the Registry by the end of 2010. The ECO also suggests that MOE bring the basic SEV elements proposed in this review to the first meeting of the renewal process and discuss how they can be further defined, refined, and/or adapted to the current SEV structure. Hopefully, these elements will stimulate further discussion on how the intent of the *EBR* at last can be fully incorporated in the SEVs, so that they can become the ministry-specific, high-level framework for environmental integration that the original *EBR* legislators intended them to be, and that the public deserves.

For ministry comments, please see pages 170-171.

8.3 Ministry Responses to Past ECO Recommendations

The ECO follows up annually on the progress made by prescribed ministries in implementing recommendations made in previous years. The ECO has requested progress reports from those ministries on key issues and recommendations made in our earlier Annual Reports. In some cases, ministries submit updates on their own initiative, and these are also summarized in this section where relevant.

Crown Land Planning and Management

In our 2006/2007 Annual Report, the ECO recommended that "MNR reform the *Public Lands Act* to create a planning system that provides MNR with the tools to better protect ecological values on all Crown lands." In replying to an ECO request for an update, MNR stated that it has completed a jurisdictional review of legislation dealing with the management of public lands in 17 North American and Australian jurisdictions. The results of the review showed that Ontario's current legislation and its overall approach to public land management are in step with those of most other jurisdictions reviewed.

Wildlife Management

In our 2007/2008 Annual Report, the ECO recommended that "MNR ensure that its wildlife management policies and models appropriately reflect the role of mammalian predators in ecosystems." According to

MNR, it “has made unprecedented progress in moving towards a more landscape and ecologically-based approach to wildlife management. Numerous leading edge ecological management frameworks for mammalian predators and prey species have/are being developed that consider the broader spatial and temporal ecological trends on the landscape (e.g., biodiversity, climate change, habitat, disease, etc.), the interaction among predators and prey, and the conservation of species and their habitat.”

MNR also states that it has a number of monitoring programs and research studies to collect baseline information on the density, distribution and health of mammalian predators, such as wolves and bears. These studies aim to improve the understanding about the role of these species in natural functioning ecosystems, including the role that protected areas play in their conservation, and to further investigate their interaction with prey species, such as moose.

The Licensing of Ontario's Zoos

In our 2006/2007 Annual Report, the ECO recommended that “MNR engage in a formal and transparent review of its zoo-licensing policies, posting a proposal on the Environmental Registry for public comment.” In response to an ECO request for an update, MNR replied that the *Provincial Animal Welfare Act, 2008*, which came into effect March 1, 2009, revises the *Ontario Society for the Prevention of Cruelty to Animals Act (OSPCA Act)* to “improve the welfare of all animals (native wildlife, non-native wildlife, and domestic animals) in captivity.” MNR stated that due to the improved standards of care in the *OSPCA Act*, MNR is considering removing overlapping conditions on zoo licenses to realize efficiencies and provide a one-window approach to animal welfare.

O. Reg. 60/09 (Standards of Care), a regulation made under the revised Act, establishes standards of adequate care, facilities and services to ensure the safety and general welfare of animals in captivity, including zoos. The *OSPCA Act* also authorizes inspectors to inspect facilities where animals are kept for exhibition, such as zoos.



While the ECO applauds MNR's participation and the consideration of stakeholder input in the development of the Act's enhanced care standards, the ECO notes that because the Ministry of Community Safety and Correctional Services (MCSCS) and the *OSPCA Act* are not prescribed under the *EBR*, the draft standards were not posted on the Environmental Registry for public comment. Moreover, despite improvements to Ontario's general animal welfare standards, the ECO notes that amendments to the *OSPCA Act* fail to address the need to

review the front-end regulation of Ontario's zoo industry. MNR's zoo-licensing system should be revised to prevent substandard facilities with inadequately trained staff from obtaining exotic species in the first place.

Aggregate Resources – State of the Resource

The ECO requested updates on both MNR's progress in preparing an aggregate resources strategy and its work on updating the state of the resource of aggregates, as a follow-up to our 2002/2003 and 2006/2007

Annual Reports. MNR advised in March 2009 that the first steps in the development of a Provincial Aggregate Strategy are to gather new data and information and review the current science on the aggregate resource. The ministry is currently working towards achieving the Premier's commitment to update the Aggregate Resource of Southern Ontario – a State of the Resource Study (1992).

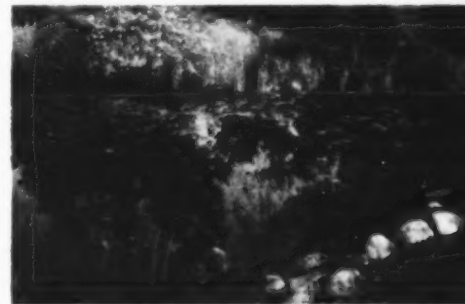
The government is funding the State of the Aggregate Resource in Ontario Study to gather the most up-to-date information and current science on the following topics: the demand for aggregates; availability and alternative sources; licensed reserves; transportation; recycling; rehabilitation; and the economic and social value of aggregates to the province. Additionally, an Aggregate Resource Advisory Committee and a Technical Expert Panel have been established.

The committees held their inaugural meeting in January 2009 and have provided input with respect to the draft terms of reference for the content of the six proposed papers. The themes of the papers are: aggregate consumption and demand; future aggregate availability and alternatives analysis; value of aggregates; recycling and reuse; aggregate reserves in existing operations; and, rehabilitation.. The project is presently in the procurement phase. Completion of the consolidated report is anticipated for the fall of 2009. This information will form the basis for the development of a Provincial Aggregate Resource Strategy.

Aggregate Resources – Rehabilitation Issues

As a result of an *EBR* application, MNR reviewed the adequacy of the *Aggregate Resources Act* with respect to rehabilitation requirements. MNR released its review in August 2006, and set out 25 recommended next steps. Among other things, MNR committed to publishing a database of sites where rehabilitation orders have been issued, and to have a list of those sites on the ministry's Internet site by December 2006. Similarly, the ministry committed to examining the merits of a rehabilitation incentive system.

MNR advised that in January 2009 it had posted rehabilitation orders for the period 2002 to 2008 on its Internet website. The ministry also stated that it will continue to monitor the industry's rehabilitation efforts and will assess the effectiveness of posting rehabilitation orders on MNR's Internet site next year. With respect to the commitment to examine the merits of a rehabilitation incentive system, MNR advised that this initiative is on-going and that it remained uncertain whether a final report would be published on the subject.



Aquaculture

The ECO's 2004/2005 Annual Report recommended "that MNR develop transparent and accountable processes related to approval processes for aquaculture operations." In March 2009, MNR advised that the ministry has taken a leadership role working with key stakeholders and Aboriginal communities to develop an updated approvals process for cage aquaculture, which harmonizes provincial and federal review requirements. The Coordinated Application and Review Guide for Cage Aquaculture Sites in Ontario will provide a consistent, transparent and coordinated licence application review and approval process, which

will ensure that economic development opportunities are balanced with environmental and social requirements. The draft Coordinated Guide was posted on the Environmental Registry in March 2007 for public comment and, again in January 2009.

Drought Response

In our 2007/2008 Annual Report, the ECO recommended that MOE revise its PTTW (Permits to Take Water) regulation to include mandatory water use reduction rules. In March 2009, MOE advised that its review had concluded that "existing approaches are well equipped to protect our water resources particularly during low water conditions."

MOE noted that a condition of each PTTW requires that no water taking can cause unacceptable interference with other users or natural functions of water sources. If essential water supplies (e.g., water for drinking and sanitation) are at risk from water taking, it is considered unacceptable interference, and MOE would intervene. MOE stated that it is examining alternative ways to require water conservation through the PTTW process, such as requirements for water conservation plans in any new and renewed PTTW. MOE reported that a provincial water conservation and efficiency strategy is being developed in conjunction with MNR, and that the strategy would "likely contain elements that affect how water is managed through the [PTTW] program."

Air Quality Monitoring and Reporting

In our 2007/2008 Annual Report, the ECO recommended that MOE expand its air quality monitoring and reporting program to include a network of street-level monitoring stations. In March 2009, MOE responded that the "current provincial air monitoring network has been established to provide overall ambient conditions, not to reflect the potential variations in micro-environments. Street-level air quality monitoring is best conducted by individual municipalities, as they have the required data and the local expertise on traffic patterns to effectively design and implement such monitoring."

To that effect, MOE reported that it participated in an air quality study led by the City of Ottawa that explored the impact of vehicle emissions at street level and the spatial variability of air quality in the National Capital Region. MOE was in the process of analyzing the data from that study and preparing a report summarizing ministry results. MOE also reported that in 2008 it provided advice to Halton Region on air quality modelling and monitoring in micro-environments, such as highway corridors, and that the Region may seek additional expertise from the ministry.

Information about air quality in micro-environments is critical for the province to properly respond to air quality issues, including cumulative and synergistic effects. While the ECO is pleased that MOE is providing assistance to municipal air quality studies, such an *ad hoc* approach does not close this information gap. MOE's response also failed to address the ECO's concern that Ontario's Air Quality Index, upon which many Ontarians rely for information about daily air quality conditions in their area, is not reflective of the air that Ontarians actually breathe at street-level.

Wells Regulation

In our 2007/2008 Annual Report, the ECO reviewed amendments to Regulation 903, made under the *Ontario Water Resources Act*, and noted that MOE had committed to developing a Best Practices Manual to assist practitioners with implementing the regulation.

In March 2009, MOE reported that it is developing two Best Practices Manuals to help implement Regulation 903: one for water supply wells, and one for test holes and dewatering wells. MOE indicated that it established an external stakeholder committee to review and provide comments on the draft manuals, including consideration of comments received by MOE during consultation on the amendments to the regulation. MOE also reported that it has entered into an agreement with Sir Sanford Fleming College for the development of the manuals.

MOE indicated that the final best practices manuals will be posted on the Environmental Registry as information notices.

The ECO is pleased that MOE appears to be making progress in developing this guidance material. However, the ECO is troubled that MOE does not intend to consult with the public on drafts of the guidance documents. In the ECO's view, the guidance documents will constitute environmentally significant policy that merits full public consultation under the *EBR*, separate from the previous consultation that MOE conducted about the amendments to Regulation 903.

Provincial Solid Waste Management Strategy

In the ECO's 2005/2006 Annual Report, the ECO recommended "that MOE develop a provincial solid waste management strategy that addresses the whole waste stream." In its March 2009 update, MOE stated it is committed to increasing the diversion of waste from landfills and reducing waste generation. Since 2006, the ministry has undertaken a number of initiatives, which combined, address a wide range of materials in the waste stream.

"The ECO commends the policy and regulatory enforcement work on solid waste policy undertaken by MOE in the past reporting year."

The ministry described the various programs it has established under *Waste Diversion Act, 2002 (WDA)*. On July 1, 2008, the Municipal Hazardous or Special Waste (MHSW) program, which diverts potentially hazardous materials from disposal in landfills or sewers toward recycling and re-use, began operation. On April 1, 2009, the Waste

Electrical and Electronic Equipment (WEEE) program was launched, which aims to keep electronic products and their toxic components out of landfills. In addition, Waste Diversion Ontario (WDO) submitted a Used Tires program to MOE that was approved by the minister in April 2009. Additionally, MOE posted a discussion paper entitled, *Toward a Zero Waste Future: Review of Ontario's Waste Diversion Act, 2002* on the Registry on October 16, 2008.

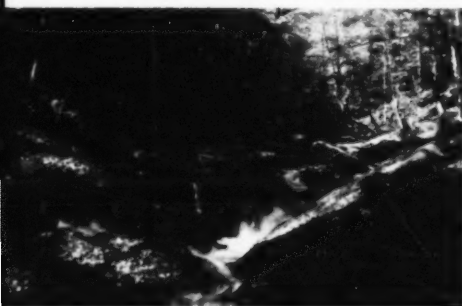
The ECO commends the policy and regulatory enforcement work on solid waste policy undertaken by MOE in the past reporting year. However, the ECO notes that, collectively, these various programs do not

constitute a provincial solid waste management strategy. The ECO urges MOE to demonstrate how it is providing leadership to help municipalities and other stakeholders deal with certain major components of the waste stream, such as the wet waste generated by homeowners and industrial, commercial and institutional (IC&I) facilities.

In addition, the ECO urges MOE to clarify current law and policy related to energy-from-waste (EFW) projects. Under section 25 of the *WDA*, waste diversion programs shall not promote "the burning of the designated waste." This poses an inherent contradiction between continued waste diversion and supplying operators of EFW facilities with adequate energy supplies to power them (because residual waste streams from most GTA municipalities lack combustible materials, such as paper, plastic and most organics). Moreover, MOE does not have a similar prohibition on burning recyclable wastes generated by the IC&I sectors under O. Reg. 103/94. It is conceivable that EFW facilities could begin to burn certain IC&I recyclables, particularly if markets for those materials do not improve in the short and medium terms.

LCBO Deposit-Return Program

The ECO 2006/2007 Annual Report described the newly introduced LCBO container deposit-return program. MOE noted that the overall container return rate was 71 per cent in year two (February 2008 to February 2009), an 8 per cent increase over the year one rate of 63 per cent. By the end of year two, the return rate for smaller glass, plastic, aseptic and bag-in-box containers was 58 per cent (compared to 50 per cent in year one). In addition, the return rate for large glass alcohol beverage containers in year two was 81 per cent, up from 72 per cent in year one. From February 2007 to February 2009, the program diverted more than 480 million alcohol beverage containers from landfills; and over 385 million glass containers, representing 181,800 metric tonnes of glass; and, 95 per cent of all glass containers collected were recycled into high-end uses such as new bottles and fibreglass insulation. The ECO applauds the progress that has been achieved by this program.



Landfill Inventory

In our 2005/2006 Annual Report, the ECO recommended that MOE update and enhance its landfill inventory and make it accessible to the public. MOE reported that it has now developed and implemented a detailed, online inventory of the 32 largest active landfills which, in total, manage over 90 per cent of the solid non-hazardous waste disposed of in the province. However, the inventory is only accessible to MOE staff through the ministry's intranet site.

Environmental Assessment Reform

The ECO's 2007/2008 Annual Report stated, "The ECO recommends that MOE's ongoing reforms of the environmental assessment process give renewed weight to up-front questions of 'need' and 'alternatives' for projects." MOE responded that many projects requiring environmental assessment (EA) are products of other broader planning processes, such as official plans, growth plans under the *Places to Grow Act, 2005*

regional transportation plans and municipal infrastructure master plans, where "need" and "alternatives to" have already been established. These processes meet many EA requirements, such as consultation, public inspection of a document, approval by an authority, and the examination of alternatives or options.

The ministry is examining how "need" and "alternatives to" could be better integrated with other planning processes. An interministerial working group determined the best option was to amend the Codes of Practice. The ministry is currently amending the existing Codes of Practice to determine circumstances where EAs and Class EA projects could rely on previous planning work to demonstrate "need" and "alternatives to."

Compliance Monitoring for Class EAs

The ECO's 2003/2004 Annual Report commented on MOE's compliance monitoring program for Class EAs under the Environmental Assessment program. The ECO inquired on where and how the public can access annual Class EA monitoring reports submitted to MOE by proponent agencies, and which ministries (or other proponent agencies) are currently preparing and submitting such annual reports on the functioning of their Class EA. The ECO also asked to what extent these monitoring reports solicit the input of members of the public who have been involved in Class EA processes.

MOE advised that it has implemented a compliance program to ensure integrity of the EA process. Changes have been made to better track compliance requirements and a range of compliance tools have been developed and are in use. This compliance program includes an annual audit program and annual monitoring and reporting as compliance tools.

The EA program audits may include audits of individual EA projects, Class EA projects and Declaration Orders which have conditions of approval. For each audit, an audit plan is prepared and approved, and defines the audit objective and scope. The scope may consist of a percentage of projects approved for a specified timeframe (typically 15 to 25 per cent) or a focused audit may be conducted to address a program priority. Since 2001, 93 audits have been carried out.

Currently, the Municipal Engineers Association, GO Transit, Ontario Waterpower Association, Ministry of Energy and Infrastructure, Ministry of Natural Resources and Conservation Ontario are required to prepare and submit annual reports on the function and effectiveness of their Class EAs. For the remaining Class EAs with no formal compliance monitoring reporting requirements, MOE will be working with proponent agencies to add them as the original Class EAs are amended.

The annual reports are available to any member of the public upon request. The ministry's Code of Practice for Preparing, Reviewing and Using Class EAs in Ontario indicates that the annual reports are public documents and that arrangements should be made by the proponent to allow the public to view the documents. Although proponent agencies are not required to post annual monitoring reports on their website, MOE encourages this practice in the Codes of Practice.

Smog Reduction

The ECC's 2000/2001 Annual Report recommended that "MOE provide timely updates on its smog reduction efforts, taking into account emission increases due to economic growth, and using clear, consistent methods to quantify emission reductions." The ECO had not observed publication of emission reduction updates subsequent to December 2002, in the second report of Ontario's Anti-Smog Action Plan (ASAP). The ECO observed that while MOE continues to issue annual air quality reports, these cover ambient conditions, not loadings or emissions from Ontario emitters. In January 2009, the ECO requested an update on trends in Ontario air emissions contributing to smog, or a reference to a recently published update.

"Most recently, in 2008, two reports from independent consulting groups under contract with MOE were posted on the Drive Clean website, confirming that Drive Clean is successful in meeting its commitment to reducing the emissions of harmful pollutants from cars and trucks on Ontario roads."

In March 2009, MOE advised that the ministry continues to report annually on ambient concentrations of ozone and fine particulate. MOE also noted there has been significant progress towards reducing the emissions of smog-forming pollutants, including setting limits on industrial emissions of nitrogen oxides (NO_x) and sulphur dioxide (SO₂) under O. Reg. 194 and through the Drive Clean program.

MOE advised of two public reports of Ontario's progress on commitments since the 2002 ASAP:

- On June 26, 2006, following the signing of a transboundary environmental agreement with Quebec at the Shared Air Summit 2006, Ontario reported on its progress towards its commitments with projected emission numbers for 2005: "from 1990 to 2005, Ontario's emissions of sulphur dioxide and nitrogen oxides, the precursors of acid rain and smog, decreased by 45 per cent and 25 per cent, respectively."
- In November 2008, the CCME posted the Acid Rain Task Group's 2006-2007 Progress Report on the Canada-Wide Acid Rain Strategy for Post-2000. Ontario made a national commitment under the CCME strategy and the report states: "Ontario is committed to reducing its emissions of SO₂ by 50 per cent from its Countdown Acid Rain Cap and NO_x by 45 per cent from the province's 1990 level by 2015. By 2005, Ontario had reduced its SO₂ by 42 per cent and its NO_x by 25 per cent from these baselines."

For the transportation sector, and as part of the Drive Clean program, MOE has commissioned and released several emissions reductions reports for both light duty vehicles (LDVs) and heavy duty diesel vehicles (HDDVs) since the start of the program in 1999. Most recently, in 2008, two reports from independent consulting groups under contract with MOE were posted on the Drive Clean website, confirming that Drive Clean is successful in meeting its commitment to reducing the emissions of harmful pollutants from cars and trucks on Ontario roads. The consultants found that in 2005 alone, Drive Clean reduced smog-causing pollutants (nitrogen oxides and hydrocarbons), and the toxic gas carbon monoxide by over 25 per cent from LDVs in the program area and reduced microscopic particulate matter from HDDVs throughout Ontario by more than 20 per cent.

The Greening of the Ontario Government

In our 2007/2008 Annual Report, the ECO recommended that the Ontario Government use its enormous purchasing power to drive economic markets for green products and services. In March 2009, the Ministry of Government Services (MGS) provided an update. Initiatives include:

- Developing a sustainable procurement policy;
- Adopting environmentally responsible paper purchasing policy;
- Buying hybrid vehicles;
- Replacing cathode ray tube (CRT) computer monitors with more energy efficient liquid crystal display (LCD) monitors; and
- Banning the purchase of incandescent bulbs for government facilities.

In September 2008, MGS established an Ontario Public Service (OPS) Green Office, which, among other things, leads key innovative sustainable procurement priorities for the OPS.

MOE and the Ministry of Economic Development (MED) also provided updates; MOE initiatives include:

- Drafting an MOE green procurement policy;
- Expanding and formalizing its purchase of renewable energy;
- Relocating some MOE staff to LEED-certified renovated office space; and
- Including eco-friendly considerations in the evaluation criteria of requests for proposals.

MED stated that it is leading several initiatives to promote green procurement within the ministry and across the OPS, including: updating its procurement policies to incorporate green criteria for purchases over \$10,000; leading Ontario's negotiations toward an Economic Partnership Agreement with Québec; and co-administering the Next Generation of Jobs Fund, which will facilitate the purchase of green technologies.

The ECO applauds MGS, MOE and MED for their procurement and greening initiatives and encourages ongoing improvements, such as early adoption of new and pioneering eco-friendly products and technologies, helping to stimulate economic markets for green products. The ECO also encourages MGS and other ministries, such as the Ministry of Health and Long-Term Care and the Ministry of Transportation, to promote green procurement policies in the broader public sector, which, with its enormous buying power, has the capacity to jump-start the development of innovative green products.

Fisheries Protocol

In 2006 the Ministry of Transportation (MTO) implemented a new protocol for protecting fish and fish habitat during highway construction. In March 2009, MTO provided an update on the roll-out and monitoring of this protocol; more than 1,000 people (staff of MTO and other agencies, consultants and contractors) have been trained. One self-screening audit and one post-construction audit have also been completed, which reviewed the roles of MTO, DFO and MNR in the protocol. These audits can identify opportunities to correct non-compliance problems and improve the protocol process. The results also will be shared with DFO and MNR to set priorities and focus on corrective actions.

Ministry of Transportation (MTO) Class Environmental Assessment

In March 2006, MTO advised the ECO that the ministry would be conducting a review of the Class EA, including responding to the ECO's past comments on this document and improving the ministry's overall EA public consultation process. In January 2009, the ECO requested an update from MOE and MTO on plans and timelines for reviewing and consulting on the MTO Class EA.



In March 2009, both ministries advised that MTO had (in January 2009) commenced a project to review its Class EA for the purposes of amending and updating the document. MOE advised that it is committed to working with MTO in improving its Class Environmental Assessment (EA) for Provincial Transportation Facilities. It is anticipated that MTO's review of the Class EA will be completed in the fall of 2009. Once the MTO review is completed and any proposed amendments are submitted to the MOE, the amendment process defined in the MTO Class EA will be implemented.

Barriers to Increasing Energy Efficiency

The ECO's 2004/2005 Annual Report recommended "that the Ontario government remove barriers that discourage commercial landlords with Ontario government tenants from undertaking major energy efficiency upgrades and recouping these costs through increases in rents paid by those tenants." In March 2009, the Ministry of Energy and Infrastructure's response was silent on the issue of allowing landlords to recoup costs for energy efficiency upgrades from Ontario government tenants. However, the ministry did describe actions that the Ontario Realty Corporation (ORC) has been taking to conserve energy within the provincial government's real estate portfolio. For example, ORC is continuing to develop Building Sustainability Guidelines, and has worked with private sector landlords to bring several government-leased buildings to LEED Silver standards.

ORC envisions a strategy for the future that involves a review of current practices, including the possible development of a "Green Lease." ORC has a representative on the REALPac green lease committee and assisted in the development of a landlord's form of Green Lease that included dealing with carbon offset credits, a carbon tax and greenhouse gases. The objective of the Green Lease is to ensure the tenant and landlord adopt environmentally friendly practices, including the following of an environmental management plan, meeting environmental objectives, and specifying what materials, furniture and fixtures may be used by the tenant in the building.

For ministry comments, please see pages 171-173.

8.4 Ministry Cooperation

The Environmental Commissioner and his staff rely upon cooperation from staff in Ontario's provincial ministries to carry out the mandate of the ECO. Our staff members are in constant contact with staff from the prescribed ministries with requests for information. Clear, prompt responses allow ECO reviews of the

ministries' environmentally significant decisions to be conducted in an efficient and straightforward manner. Section 58 of the *Environmental Bill of Rights, 1993* requires the ECO to include in our annual report to the Legislature a statement on whether or not prescribed ministries have cooperated with requests by the ECO for information.

Staff members at the prescribed ministries are generally cooperative in providing information when it is requested. The prescribed ministries and one agency (the Technical Standards and Safety Authority) each have one staff person who is designated as an *EBR* coordinator or contact. Most of the day-to-day interaction between the ECO and the ministries occurs via these coordinators, which are very important positions with respect to effective *EBR* implementation. The ECO once again urges ministries to notify our office immediately of any changes in the *EBR* coordinator/contact position to ensure optimum communication and cooperation between the ECO and the prescribed ministries. The ECO also directly contacts ministry staff responsible for program delivery with specific, detailed information requests related to ministry programs.



Cooperation by the Ministry of the Environment

The ECO makes regular requests for information to the Ministry of the Environment's *EBR* Office (EBRO) through its managers, which saves time for staff at both ends. In 2008/2009, the EBRO staff have been cooperative in most cases, and responses to ECO requests were thorough and informative. MOE staff were particularly helpful in providing updates on several *EBR* applications. In October 2008, the ECO wrote MOE and asked for updates on a handful of ongoing *EBR* application reviews, including the stormwater management and enhanced protection for groundwater under the Waterloo and Paris Galt moraines. Since MOE had indicated in its response letters to the applicants that it intended to take more than 18 months to conduct the reviews, the ECO decided that it would be worthwhile to request regular updates and carefully monitor MOE's progress. In late 2008 and early 2009 MOE staff provided very useful briefing meetings for ECO staff. There has, however, been a marked deterioration in MOE's ability to forward routine documents needed by the ECO for decision reviews, including SEV consideration notes and written public comments submitted to MOE that were not available on the Registry because they were not filed electronically.

Cooperation by the Ministry of Natural Resources

As reported in previous years, the *EBR* Coordinator for the Ministry of Natural Resources (MNR) was very helpful to ECO staff. MNR staff made some very useful presentations and on several occasions throughout this reporting year supplied ECO staff with supplemental information in addition to that which was requested. The ECO also contacts front-line staff at the MNR and other ministries directly with specific requests for information. Individual MNR staff members and most staff in other ministries were very cooperative in supplying the information requested in a reasonable response time.

Cooperation by the Ministry of Northern Development and Mines

In previous years the ECO has reported that the Ministry of Northern Development and Mines (MNDM) was unresponsive to the ECO's requests for information, or very slow in responding. In this reporting year, the ECO is pleased to report that MNDM made significant efforts to improve their cooperation with the ECO. However, in at least one case, the timeline for responding to an information request exceeded four months.

Progress Reports on ECO Recommendations

Each year the ECO asks ministries to provide updates on describing their progress on ECO recommendations. Most ministries provide these updates in a timely manner and provide useful summaries to the ECO. For a number of years, some ministries consistently have failed to provide the ECO with these reports or have done so long after they were due. In this reporting year, MNDM and the Ministry of Economic Development (MED) both failed to provide updates before the end of March 2009.

Responses to the ECO's Unposted Proposals and Decisions Project

Under the rubric of the ECO's unposted proposals and decisions project (see Part 7.2 of this Annual Report), we send formal written inquiries requesting that ministries post notices on the Environmental Registry about policies, bills, regulations, and instruments and/or requesting information on how the ministry determined the environmental significance of a proposal and whether it considered its Statement of Environmental Values. The letter may also ask the ministry to provide information on any other related public consultation activities undertaken by the ministry. Most of the ministries cooperated with these inquiries and, in some cases, agreed with ECO proposals to promptly post Registry proposal notices about policies and bills before the Legislature. However, there were some examples where ministries failed to cooperate with the ECO. For example, MMAH failed to respond to an ECO request to post an information notice about the ministry's statutory review of the *City of Toronto Act, 2006*. For further information, see Unposted Decisions in Part 7.2 of this Annual Report.

Part 9: Appeals, Lawsuits and Whistleblowers



Ontarians have the right to comment on environmentally significant government proposals, ask for a review of current laws, or request an investigation if they think someone is contravening an environmental law. The *Environmental Bill of Rights, 1993 (EBR)* also provides Ontarians with several other legal tools including:

- the right to request appeals of certain ministry decisions;
- the right to sue for damages for direct economic or personal loss because of a public nuisance that has harmed the environment;
- the right to sue if someone is breaking, or is about to break, an environmental law that has caused, or will cause, harm to a public resource; and
- the right to protection against reprisals for reporting environmental violations in the workplace and for exercising the rights available to them under the *EBR*.

Appeals

The *EBR* gives Ontarians the right to apply for leave to appeal ministry decisions to issue certain instruments, such as the permits, licences or certificates of approval granted to companies or individuals. The person seeking leave to appeal must apply to the proper appeal body, such as the Environmental Review Tribunal (ERT or the "Tribunal"), within 15 days of the posting of a decision notice on the Environmental Registry. They must show that they have an interest in the decision, that no reasonable person could have made the decision, and that it could result in significant harm to the environment.

Status of Leave Applications on MOE Instruments

During the 2008/2009 reporting period, concerned residents and environmental groups filed five leave to appeal (LTA) applications involving approvals issued by the Ministry of the Environment (MOE). (Further details are provided in the Supplement to this Annual Report). The MOE instruments that were appealed included Permits to Take Water (PTTWs) and Certificates of Approval (Cs of A).



As noted in the ECO's 2007/2008 Annual Report, two LTA applications were pending as of March 31, 2008. Both applications to the ERT were dismissed.

In two cases filed and decided during the 2008/09 reporting period, leave was refused. In another case, the Tribunal decided that the issuance of a PTTW did not constitute a decision to implement a proposal for a Class I instrument because it was issued for only 357 days. Pursuant to O. Reg. 681/94 made under the *EBR*, a proposal for a PTTW is a proposal for a Class I instrument if the proposal "would authorize the taking of water over a period of one year or more."

As noted in Table 1 below, two LTA applications were pending as of March 31, 2009. These applications will be described in the 2009/2010 ECO Annual Report Supplement.

One ERT appeal hearing related to two successful LTA applications described in previous ECO Annual Reports also was concluded during the reporting period. This case, *Baker v. MOE*, involved approvals

granted to Lafarge Canada by MOE in late 2006. The appeal on this dispute was finally settled in June 2009, as described below.

Table 1 Leave to Appeal Application Results for MOE Instruments
(as of March 31, 2009)

Leave granted	0
Leave denied	2
Leave decision pending	2*
Settled prior to adjudication	0
Withdrawn prior to adjudication	0
Not a Decision subject to Leave to Appeal Rights in the <i>EBR</i>	1
Total	5

* One case, *POWER v. MOE*, was decided in early June 2009.

Status of Regular Appeals of MOE Instruments

Seven "instrument holder" notices of appeal for MOE instruments were posted on the Environmental Registry during the reporting period. The *EBR* requires the ECO to post notices of these appeals, which are launched by companies or individuals who were the subject of a remedial order, were denied an approval, or were unsatisfied with the terms and conditions of an approval. The notices alert members of the public who may then decide to become involved with such an appeal as provided by section 47 of the *EBR*.

Status of Regular Appeals of MMAH Instruments

During the reporting period, the ECO posted two notices of appeal for Ministry of Municipal Affairs and Housing (MMAH) instruments on the Registry. Residents, companies or municipalities can launch these appeals in relation to decisions made by MMAH under the *Planning Act* to approve a municipality's official plan, an official plan amendment, and other approvals in areas of Ontario where no official plan is in place.

Update on the Lafarge case

In our last two Annual Reports we described the appeal of MOE's decision to issue two Cs of A to Lafarge Canada Inc. permitting the company to test burn alternative fuels at its cement plant in Bath, west of Kingston. (For a more detailed summary, see the ECO's Annual Report 2007/2008, pages 188-189). The C of A for the waste site, issued under section 39 of the *Environmental Protection Act* (EPA), allowed Lafarge to import and burn up to 100 tonnes per day of solid non-hazardous waste materials such as tires, animal meal, plastics, shredded tires, solid shredded materials, and pelletized municipal waste. The C of A (air) issued under section 9 of the *EPA* set out monitoring requirements to detect toxins that might be released into the environment.

In early January 2007, a number of local residents and representatives of a number of environmental groups (including Clean Air Bath, the Loyalist Environmental Coalition, and Lake Ontario Waterkeeper) applied for leave to appeal MOE's decisions. (For a detailed outline of the grounds, see the ECO's 2007/2008 Annual Report Supplement).

In early April 2007, the ERT granted leave to most of the applicants with respect to the two Cs of A. The ERT found that the successful applicants met the first requirement of the leave test for the C of A (air) on several grounds including the following reasons:

- The Director did not assess the potential cumulative ecological consequences of approving the C of A application. The ERT noted that the mere fact that the C of A complies with O. Reg. 419/05 was not sufficient to establish that the decision to issue the C of A was reasonable, or to establish that MOE had taken an ecosystem approach in making its decision, as required by MOE's 1994 Statement of Environmental Values (MOE's 1994 SEV).
- The Director did not follow the direction in MOE's 1994 SEV to apply a precautionary approach. The ERT noted that the Cs of A were approved in the face of uncertainty by MOE about the environmental risk of the permitted activity.

The ERT also found that, despite the fact that MOE has concluded that the facility is able to operate in accordance with O. Reg. 419/05, MOE regulations do not incorporate consideration of cumulative effects, total ecosystem loading, synergistic effects or bioaccumulation.

In late September 2007, Lafarge announced it would be applying for a judicial review of the ERT's April 2007 decision to Ontario's Divisional Court. Lafarge's lawyers filed a notice stating they would argue that the Tribunal made an error when it decided that MOE's 1994 SEV is part of the "relevant law and ... government policies" developed to guide MOE decision-making. Lafarge also stated that it intended to challenge the Tribunal's finding that the Directors' decisions failed to apply an "ecosystem approach" and a "precautionary approach," contrary to MOE's 1994 SEV.

In mid-June 2008, the Divisional Court ruled that the ERT had acted reasonably in granting leave to appeal. The court agreed with the lawyers for the environmental groups and the ECO that MOE's 1994 SEV should be considered applicable policy by the Tribunal. The court also agreed that it was reasonable for the ERT to conclude that MOE should have considered the ecosystem approach and the precautionary principle as set out in MOE's 1994 SEV.

In early July 2008, Lafarge applied to the Ontario Court of Appeal for leave to appeal the Divisional Court decision and the Tribunal's appeal hearing was further adjourned. On November 28, 2008, the Court of Appeal dismissed Lafarge's application for leave to appeal.

By email to the Tribunal dated December 18, 2008, counsel for Lafarge indicated that, in light of the Court of Appeal's decision, Lafarge had obtained the MOE Directors' agreement to revoke both Cs of A. Accordingly, Lafarge requested an Order from the Tribunal terminating the appeal proceeding.

On December 18, 2008, the Tribunal held a status update hearing by teleconference. None of the parties opposed the proposed revocations or the dismissal of the appeal proceeding. The Tribunal concluded that the proposed revocations were consistent with the purpose and provisions of the EPA and were not contrary to the public interest, as Lafarge had not implemented the operations authorized under the Cs of A. Accordingly, the Tribunal dismissed the proceeding.

Following the C of A revocations, the Loyalist Environmental Coalition, Lake Ontario Waterkeeper, and certain individuals (collectively, the "Costs Applicants") sought a cost award against Lafarge only. The Costs Applicants, Lafarge, and the Director all filed submissions respecting the cost award and provided oral submissions to the Tribunal on April 15, 2009.

In June 2009, the ERT dismissed all of the applications for cost awards against Lafarge. The Tribunal did not accept the Costs Applicants' submission that Lafarge's rationale for requesting the adjournment of the main ERT hearing was entirely without merit. The Tribunal observed "that Lafarge's actions must be measured in light of the circumstances that existed at the time the action was taken. No one, at that time, could have known what the outcome of the Judicial Review would be. Lafarge had a legal right to seek Judicial Review. Lafarge's purpose in seeking the adjournment in September 2007 was to allow Lafarge the opportunity to pursue this application."

The Implications of the Lafarge Decision

The Divisional Court's decision in the *Lafarge* case has a number of important implications for the ministries that make decisions on instruments including MOE, the Ministry of Natural Resources (MNR), the Ministry of Northern Development and Mines (MNDM) and MMAH. First, the unmistakable implication of the decision is that ministers and their delegated staff have a duty to ensure their ministry's SEVs are considered when they make any environmentally significant decisions on instruments. It is the ECO's understanding that, prior to the *Lafarge* court decision, ministries that are required to issue environmentally significant instruments (as outlined in O. Reg. 681/94) generally did not prepare SEV consideration documents when making these decisions. To encourage ministries to begin to modify their practices, in July 2008 the ECO wrote to MOE, MNR, MNDM, and MMAH outlining the implications of the *Lafarge* decision and noting that before the ECO can begin to analyze how these ministries are complying with their SEVs, the ECO must be provided with SEV consideration documents for instrument decisions. The ECO thus requested that these four ministries review how they will respond to the Divisional Court decision and begin to provide the ECO with SEV consideration documents for future instrument decisions. In response to the ECO letters, the ministries requested and were granted meetings with the Commissioner to outline how they would begin to comply with the Divisional Court decision.



In late October 2008, revised versions of most SEVs were released (for a detailed analysis of the 2008 ministry SEVs, see Part 8.2 of this Annual Report). While the 1994 MOE SEV stated that all approvals were to reflect the principles in the SEV including the precautionary principle, the new SEV removes this requirement. Instead, the wording of the 1994 MOE SEV has been supplanted by a commitment in the 2008 MOE SEV to a "precautionary, science-based" approach to decision-making. In addition, the October 2008 decision notice for the 2008 SEVs states that MOE and MNR are working to develop "the long-term tools, including science, policies and guidelines to support the application of an ecosystem approach, including consideration of cumulative effects, to environmentally significant decision making."

Acton residents challenge Quarry PTTW

In December 2008, a group representing residents living in Acton called Protect Our Water and Environmental Resources Inc. (POWER) and Stephen and Kathy Lister applied for leave to appeal a decision by MOE to issue a PTTW to St. Lawrence Cement Inc. The draft PTTW was posted on the Registry from September 4, 2007 to October 4, 2007 (Registry No. 010-1538). During the public comment period, no comments were received but an MOE Surface Water Specialist received a letter from Stephen Lister on October 5, 2007. Although the letter was received after the formal comment period had ended, MOE advised the ERT that it was considered during the review of the PTTW application.

The applicants sought leave to appeal on the grounds that the Director's decision was not consistent with the public participation provisions and other principles under MOE's 1994 SEV, and was not consistent with the Divisional Court ruling in the *Lafarge* case. In particular, the applicants argued that the Director's decision failed to take into account the

ecosystem approach, did not adopt a precautionary approach, and failed to promote resource conservation. Moreover, the applicants stated that the MOE Director failed to consider the common law rights of landowners in the area, who have been experiencing water quality and quantity concerns for several years. In addition, the applicants argued that the PTTW did not comply with the sustainability and ecosystem function requirements entrenched in the purpose section of the *Ontario Water Resources Act (OWRA)*, O. Reg. 387/04 (the PTTW regulation made under the *OWRA*), MOE's PTTW Manual and other MOE policies. The applicants further contended the PTTW had the potential to cause significant environmental harm, including off-site impacts to the environment, nearby residents, and those that rely on groundwater for their water supply, and they suggested that previous dewatering activities for the operation have impacted natural and biotic features in the area.

"...the applicants stated that the MOE Director failed to consider the common law rights of landowners in the area, who have been experiencing water quality and quantity concerns for several years."

In a decision issued in early June 2009, the ERT denied the leave to appeal application. The ERT noted that under the first part of the test set out in section 41, the applicants are required to demonstrate that there is good reason to believe that no reasonable person, having regard to the relevant law and to any government policies developed to guide decisions of that kind, could have made the decision. Under the second part of the test, the applicants are required to demonstrate that the decision in respect of which the appeal is sought could result in significant harm to the environment. The ERT ruled that the applicants did not explain in detail "how the Director has failed to take into account the ecosystem approach, the precautionary principle or resource conservation." The ERT ruled the applicants' assertions were of a general nature and "did not provide sufficient evidence to suggest that no reasonable person, having regard to common law rights, could have issued the PTTW."

Finally, the ERT concluded that "the applicants must demonstrate that the inclusion or exclusion of terms and conditions, or the nature or scope of some of those terms and conditions, meet the test [of section 41 of the *EBRI*]." The ERT ruled the applicants failed to meet this test because MOE provided an explanation for including each condition in the PTTW. Given the ERT's findings on the first part of the leave to appeal test, the Tribunal concluded that it was not necessary to consider the second part of the test.

Public Nuisance Cases

Prior to 1994 when the *EBR* came into force, claims for public nuisances in Ontario had to be brought by the Attorney General or with leave of the Attorney General. Today, under section 103 of the *EBR*, someone who has suffered direct economic loss or personal injury as a result of a public nuisance can bring forward a claim and no longer needs the approval of the Attorney General. No new cases including public nuisance as a cause of action came to the ECO's attention during the reporting period, although one case launched in 2001 continues to move through the courts.

In previous Annual Reports, the ECO has described the environmental class action lawsuit related to the Port Colborne Inco facility, *Pearson v. Inco Limited et al.* In March 2001, Wilfred Pearson launched a class action lawsuit against Inco Limited, the City of Port Colborne, the Regional Municipality of Niagara, the District School Board of Niagara, and the Niagara Catholic District School Board. Section 103 of the *EBR* is listed as one cause of action.

As reported in our previous Annual Reports, the Ontario Court of Appeal overturned the two lower court rulings that refused to certify a class of property owners. In doing so, the Court of Appeal determined that when environmental class litigants properly frame their claims, they can be certified. On June 29, 2006, the Supreme Court of Canada rejected Inco's application for leave to appeal, which means that the *Pearson* case can proceed to trial. As of July 2009, the trial was scheduled to begin in the fall of 2009 in Welland. The ECO will provide updates in future Annual Reports.

The Right to Sue for Harm to a Public Resource

The *EBR* gives Ontarians the right to sue if someone is violating, or is about to violate, an environmentally significant statute, regulation or instrument, and has harmed, or will harm, a public resource. To date, the only court action brought under the Harm to a Public Resource provisions of the *EBR* for which notice has been provided to the ECO is a proceeding started in 1998 by the Braeker family against the Ministry of the Environment and Max Karge, an owner of an illegal tire dump. Civil actions often take a long time to be resolved if there is no settlement, and the Braeker action is on-going. The ECO will continue to monitor this case, and will report on its ultimate conclusion.

Whistleblower Rights

The *EBR* protects employees from reprisals by employers if they report unsafe environmental practices of their employers or otherwise use their rights under the *EBR*. In July 2007, an applicant filed an application with the Ontario Labour Relations Board (OLRB) under section 174 of the *EPA* and section 105 of the *EBR*. The applicant alleged that he had experienced reprisals from his employer as a result of raising issues under these statutes and other environmental laws including the *Environmental Assessment Act (EAA)*. In rejecting the application on a preliminary basis, the OLRB noted in its July 2008 decision that the applicant could have filed his reprisal application with the OLRB in 2005 but he chose not to do so. Instead he elected to proceed under his collective agreement and filed a grievance with respect to the employer's actions. The OLRB agreed with the employer that to allow the OLRB application at this time would be untimely and unfair to the employer. Further details on the application are provided in Section 10 of the Supplement to this Annual Report.

Part 10: Developing Issues



As part of our Annual Report, the ECO often identifies issues that may be escaping broader public attention, but have the potential for significant environmental impacts, and thus deserve greater prominence and stronger government response. This year, the ECO has chosen to focus on the rapidly developing field of nanotechnology.

10.1 Nanotechnology: Tiny Particles, Big Risks?

Over the coming decades, nanotechnology – the science of controlling matter at near atomic scales to produce unique or enhanced materials, products and devices – is expected to transform science, technology and society. Concerns have been raised, however, that the properties of nanomaterials that make them so beneficial could also impart unknown health and environmental effects.

Benefits of Nanotechnology

Nanoparticles are particles that measure at the nanoscale – one nanometre (nm) is a billionth of a metre – and are typically between 0.1 and 100 nanometres in thickness, diameter or total size. For comparison, a human hair is about 100,000 nm in width. Although nano-sized particles are commonly produced as a by-product of natural and industrial processes, it was only with the invention of the scanning tunnelling microscope in 1981 that the deliberate manufacture, manipulation and use of materials at the nanoscale became possible.

Nanotechnology is alluring because materials reduced to the nanoscale can have very different properties than those at the macroscale (i.e., a size observable to the naked eye). These include novel optical, electrical, thermal, magnetic and mechanical attributes. Because these unique properties can be used in thousands of applications, this "platform technology" may be as potentially transformative as electricity or the Internet.

Nanomaterials (materials with structured components with at least one dimension less than 100 nm) are found in over 600 commercial products, including paints, sporting goods, clothing, batteries and cosmetics. Nanomaterials are used to make tennis rackets stronger, pants wrinkle- and stain-resistant, and sunscreens more transparent. Perhaps, the most significant advances in nanotechnology, however, are in the fields of environmental monitoring and purification, renewable energy, medicine and compact electronics.

New "nanoproducts" and applications are not only being developed with increasing frequency, but are becoming increasingly complex. For example, small diagnostic "lab-on-a-chip" cartridges use nanoscale sensors (e.g., genetically modified bacteria) to quickly detect and analyze water pollutants, disease agents and biological weapons. Scientists are also working on complex applications to repair nerve and skin damage, restore vision and hearing, and target cancerous tumours. While these applications hold the potential to provide important benefits to society, their increasing complexity complicates the evaluation of potential risks.

Concerns about Nanoproducts

Although the small size of nanoparticles can impart many useful properties, this same feature may make some nanomaterials harmful to humans and the environment. Because the surface area to volume ratio of nanoparticles is much higher than it is for substances at the macroscale, nanomaterials can be much more reactive. Furthermore, nanoparticles are so small that they can pass through cell membranes, including the protective blood-brain and placental barriers, with unknown health effects. The shape and surface characteristics of different kinds of nanoparticles can also affect their toxicity. Ingestion of or direct contact with some nanomaterials could pose long-term risks to workers and consumers.

Nanomaterials that find their way into the environment could have impacts on wildlife. For instance, silver nanoparticles impregnated into socks to combat odour-causing bacteria could be released when these articles are discarded or washed, possibly with toxic effects on soil bacteria and aquatic species.

“Nanomaterials that find their way into the environment could have impacts on wildlife.”

Besides the potential health and ecological impacts, this revolutionary technology could cause great damage if used intentionally to inflict harm. For example, the ability to construct tiny weapons and surveillance electronics raises concerns about security and privacy, particularly with regard to terrorism. Furthermore, some fear that self-replicating “nanomachines,” developed to disassemble physical structures or biological organisms at the molecular level, could wreak havoc if released.

While such doomsday scenarios may sound alarmist, clearly the transformative potential of nanotechnology requires ethical standards to ensure that it is used to benefit society and safeguard environmental quality. Although many of the ethical implications surrounding nanotechnology are not new, the public debate is hampered by a lack of information and general awareness.

Regulatory Challenges

The difficulty with regulating nanomaterials is that there is still no agreement – and, in some cases, even the technical capacity – on how to describe, measure, and test for these new materials. Because the structure and surface area of nanoparticles can impart an increase in chemical reactivity and biological activity independent of a discernible increase in quantity or mass, the measurement and regulation of toxicity levels is not easy. Little is known about the individual or combined toxicity of nanomaterials or their behaviour in the environment, including their propensity to bioaccumulate, disperse and degrade.

Given the complexity of regulatory issues, national and international organizations, including the International Standards Organization (ISO), are collaborating to develop standards and guides for regulators. The Organisation for Economic Co-operation and Development and the European Union (EU), as well as Canada and other countries, are involved in this technical work and are developing methods for scientific testing and risk assessment.

Canada's Regulatory Approach

Despite the potential for nanomaterials to be more dangerous, Canada, the US and the EU initially treated nanomaterials like macroscale substances. In Canada, nanosilver and carbon nanotubes have been regulated like silver and carbon – simply as existing substances already in commercial use. There are no regulations under the *Canadian Environmental Protection Act, 1999 (CEPA)* specific to nanomaterials.

In June 2007, however, Environment Canada issued New Substances Program Advisory Note 2007-06, "Requirements for nanomaterials under the New Substances Notification Regulations (Chemicals and Polymers)." According to the advisory, CEPA's New Substances Notification Regulations would apply to materials having "unique structures or molecular arrangements," thereby requiring new nanoscale versions of "existing" substances on the Domestic Substances List (DSL) to undergo a risk assessment of their potential effects on the environment and human health. This includes carbon fullerenes or nanotubes, for example, but not other nanomaterials that have the same structural or molecular arrangement as existing materials on the DSL. Any new material that is not on the DSL, whether macroscale, nanoscale or a combination of both, would be subject to assessment under the regulations.

In September 2007, Environment Canada and Health Canada published the "Proposed Regulatory Framework for Nanomaterials under the *Canadian Environmental Protection Act, 1999*." This document describes a two-phased approach initially involving international collaboration and information-gathering. During the second phase, additional changes to CEPA regulations would be considered as standards and information become available.

In early 2009, the Canadian government also announced pending requirements under CEPA for companies to report their quantities, usage, and toxicity of nanomaterials, which would make Canada the first country to initiate such regulatory action.

The Ontario Government and Nanotechnology

To date, in Ontario, government efforts related to nanotechnology appear to have focused on encouraging economic growth, attracting investment to the province, and supporting development through universities and research grants.

Since 2003, the Ministry of Research & Innovation (MRI) has provided \$63 million in funding to 123 nanotechnology projects with a range of applications, including information and communications technology, fuel cells, environmental remediation, and early disease detection. Of these projects, only six are designed to investigate the potential adverse impacts of nanomaterials.

Ontario Investment and Trade Services, an office of the Ministry of Economic Development and Trade, has produced a brochure designed to attract investors to Ontario by advertizing the province's research talent, skilled workforce and commitment to commercializing nanotechnology. In comparison, Québec's Ministry of Economic Development, Innovation and Export Trade funded a non-profit organization, NanoQuébec, which developed occupational health and safety guidelines for nanomaterials.

The Ministry of the Environment (MOE) does not have a dedicated program area that focuses on nanotechnology policy or regulation. MOE is, however, involved with the activities of the ISO through representation on the Canadian committee reviewing and commenting on the development of international standards for nanotechnology. MOE also monitors other local and international activities related to nanotechnology through staff participation in meetings, presentations given by guest speakers at internal seminars, and the scanning of relevant literature.

Ontario's Role

Despite the challenges in regulating nanotechnology, the ECO notes that many difficult-to-control technologies (e.g., genetically modified organisms, nuclear weapons) have already engendered novel and thoughtful regulatory frameworks. Nanotechnology is simply another field that requires the collaboration of scientific, ethical and social perspectives to develop a framework that proactively prevents, manages and reduces risk.

Because the Canadian government typically sets national standards for food and consumer product safety, including labelling requirements, it is most appropriate for the federal government to regulate the labelling and use of nanomaterials in consumer products and food. If the federal government, however, fails to implement adequate and timely regulations, the Ontario government should be prepared to take regulatory action. The province could act alone or in concert with other provinces at the Canadian Council of Ministers of the Environment to implement consistent regulation across the country.

The Ontario government, and particularly MOE, should closely monitor the development of different nanotechnologies and the growing body of research on their environmental and human health impacts. Moreover, because Ontarians could be exposed to potentially harmful nanomaterials via pathways other than through the use of consumer products, the ECO encourages MOE to be proactive in developing and implementing protective policies and building the technical capacity to evaluate potential risks.

Nanomaterials have the potential to enter the environment through air, water, sediment and soil as by-products of manufacturing processes, and in sewage sludge and waste. Given the unknown effects of nanomaterials on the environment, the ECO encourages MOE to investigate and regulate the safe disposal of nanomaterials from research labs and industry and from the consumer use of nanoproducts. Moreover, because some nanoparticles are known to escape sewage treatment processes, MOE should evaluate the effectiveness of current drinking water and sewage treatment processes for removing potentially toxic nanomaterials.



Once the impacts of nanomaterials are better understood, MOE should include appropriate limits for nanomaterials in Ontario's air standards and regulations. In the meantime, MOE should monitor or implement its own research on the effectiveness of existing air pollution controls in treating nanomaterials.

MOE also should consider monitoring which Ontario facilities use and produce nanoparticles and include nano-specific conditions in Certificates of Approval.

With regard to the promotion and funding of nanotechnology in the province, the government should favour innovative research that considers the life cycle and environmental impacts of nanoproducts or specifically investigates methods to evaluate those effects.

Because MRI is responsible for promoting and funding leading edge research like nanotechnology and developing a policy framework for research and innovation across government, there is the potential for MRI to make nanotechnology-related decisions that will have significant impacts on the environment. MRI should therefore be prescribed under the *EBR* to ensure that the environment, the purposes of the *EBR*, and public comment are considered in MRI's environmentally significant decision-making.

For ministry comments, please see page 174.



Financial Statements



Office of the Environmental Commissioner

Statement of Expenditure

For the Year Ended March 31, 2009

	2009	2008
	\$	\$
Salaries and wages	1,277,470	1,149,889
Employee benefits (Note 4)	253,574	216,944
Transportation and communication	80,776	75,970
Services	1,012,679	727,402
Supplies	187,357	70,353
	<u>2,811,856</u>	<u>2,240,558</u>

See accompanying notes to financial statement.

Approved:



Environmental Commissioner

Office of the Environmental Commissioner

Notes to Financial Statement

March 31, 2009

1. Background

The Office of the Environmental Commissioner commenced operation May 30, 1994. The Environmental Commissioner is an independent officer of the Legislative Assembly of Ontario, and promotes the values, goals and purposes of the *Environmental Bill of Rights, 1993 (EBR)* to improve the quality of Ontario's natural environment. The Environmental Commissioner also monitors and reports on the application of the *EBR*, participation in the *EBR*, and reviews government accountability for environmental decision making.

2. Significant Accounting Policies

BASES OF ACCOUNTING

The Office follows the basis of accounting adopted for the Office of the Assembly as required by the *Legislative Assembly Act* and accordingly uses a modified cash basis of accounting which allows an additional 30 days to pay for expenditures incurred during the year just ended. This differs from Canadian generally accepted accounting principles in that for example liabilities incurred but unpaid within 30 days of the year end are not recorded until paid, and expenditures for assets such as computers and office furnishings are expensed in the year of acquisition rather than recorded as capital assets and amortized over their useful lives.

3. Expenditures

Expenditures are paid out of monies appropriated by the Legislative Assembly of Ontario.

Certain administrative services are provided by the Office of the Assembly without charge.

4. Pension Plan and Post-retirement Benefits

The Office's permanent employees (and non-permanent employees who elect to participate) participate in the Public Service Pension Fund (PSPF) which is a defined benefit pension plan for employees of the Province and many provincial agencies. The Province of Ontario, which is the sole sponsor of the PSPF, determines the Office's annual payments to the fund. As the sponsor is responsible for ensuring that the pension funds are financially viable, any surpluses or unfunded liabilities arising from statutory actuarial funding valuations are not assets or obligations of the Office. The Office's required annual payments of \$93,360 (2008 - \$76,009), are included in employee benefits expense.

The cost of post-retirement non-pension benefits were paid by the Ministry of Government Services and are not included in the statement of expenditure.

Office of the Environmental Commissioner

Notes to Financial Statement

March 31, 2009

5. Lease

The Office has a lease agreement with its landlord for its current premises expiring on February 28, 2013. The minimum lease payments for the remaining term of the lease are as follows:

	\$
2009/10	219,400
2010/11	219,400
2011/12	219,400
2012/13	201,100
	<u>859,300</u>

2008/2009 Recommendations

Recommendation 1

Recommendation 2

Recommendation 3

Recommendation 4

3.6 No Bike Lanes on Bloor

The ECO recommends that MOE consider ordering the Municipal Engineers Association to amend the Municipal Class Environmental Assessment to explicitly promote cycling and walking as modes of transport.

Recommendation 5

4.2 Amphibian Declines

The ECO recommends that MNR develop and lead a coordinated interministerial plan to protect and conserve amphibian populations, reflecting the full range of threats and challenges.

Recommendation 6

4.3 Forest Biofibre

The ECO recommends that MNR lead other ministries (including OMAFRA, MEI, MNDMF and MOE) in

Recommendation 7

Recommendation 8

Recommendation 9

4.5 Soil: Our Eroding Asset

The ECO recommends that OMAFRA establish an aggressive soil conservation agenda, including a long-term strategy to bring Ontario's net soil loss down to zero.

Recommendation 10

4.5 Soil: Our Eroding Asset

The ECO recommends that OMAFRA establish an aggressive soil conservation agenda, including a long-term strategy to bring Ontario's net soil loss down to zero.

Recommendation 11

6.5 Richmond Landfill Site

The ECO recommends that MOE require the immediate closure of the Richmond Landfill Site.

2008/2009 Recommendations

Recommendation 1

3.1 Reforming Land Use Planning

The ECO recommends that MMAH's 2010 review of the PPS introduce effective mechanisms for protecting significant woodlands, including mechanisms for woodland evaluation, designation, tracking and reporting.

Recommendation 2

3.1 Reforming Land Use planning

The ECO recommends that MMAH take the lead in developing legislation to discourage developers from using cost applications and similar tactics to frustrate public participation in the planning approval process.

Recommendation 3

3.3 The Swiss Cheese Syndrome

The ECO recommends that MNR's existing commitment to consider its SEV and cumulative effects during instrument decisions should also apply to instruments issued under the *Aggregate Resources Act*.

3.6 No Bike Lanes on Bloor

The ECO recommends that MOE consider ordering the Municipal Engineers Association to amend the Municipal Class Environmental Assessment to explicitly promote cycling and walking as modes of transport.

4.2 Amphibian Declines

The ECO recommends that MNR develop and lead a coordinated interministerial plan to protect and conserve amphibian populations, reflecting the full range of threats and challenges.

4.3 Forest Biofibre

The ECO recommends that MNR lead other ministries (including OMAFRA, MEI, MINMF and MOE) in developing a biofuels strategy that reflects the full ecological implications of making biomass a major component of Ontario's energy supply mix.

Recommendation 7

4.4 Protected Areas

The ECO recommends that MNR ensure that the first priority of the *Provincial Parks and Conservation Reserves Act, 2006* – ecological integrity – is also clearly reflected and prioritized in all policies, manuals and guidance documents that influence the planning and management of Ontario's protected areas.

Recommendation 8

4.4 Protected Areas

The ECO recommends that MNR and MNDM develop regulatory mechanisms and policies to allow lands to be protected in cases where environmentally significant sites and mining claims conflict.

4.5 Soil: Our Eroding Asset

The ECO recommends that OMAFRA commit to systematically monitoring, documenting and reporting on farm soil erosion risk levels, net annual soil loss rates and trends in soil organic matter.

4.5 Soil: Our Eroding Asset

The ECO recommends that OMAFRA establish an aggressive soil conservation agenda, including a long-term strategy to bring Ontario's net soil loss down to zero.

6.5 Richmond Landfill Site

The ECO recommends that MOE require the immediate closure of the Richmond Landfill Site.

Appendix A – Ministry Comments



In this Appendix, ministries provide feedback to the Environmental Commissioner on articles contained in the main part of the Annual Report.

Part 3: Building Resilience in Planning

3.1 Reforming Land Use Planning

Ministry of Municipal Affairs and Housing:

The Provincial Policy Statement (PPS) represents the interests of all ministries involved in land use planning. In many cases, ministries use their technical expertise to formulate policy in areas related to their mandates. MMAH takes seriously its obligations under the *EBR* regarding requests to review policies, acts, regulations or instruments. The *Planning Act* mandates each PPS be reviewed no later than five years after being issued. The last PPS review in 2005 resulted in significant changes providing additional protections for the environment. The next review begins by March 1, 2010. Each review provides opportunities to identify and address issues including those raised by *EBR* applications for review.

Subsection 68(1) of the *EBR* provides that the Minister “shall not determine” that the public interest warrants a review of a decision (which would include the PPS), made during the five years preceding the date of the application for review, if the minister considers that the decision was made consistent with the intent and purpose of Part II of the *EBR*.

The Waterloo, Paris and Galt moraine review was led by MOE with MNR and MMAH participation. MOE’s review concluded that while new policy or legislation is unnecessary, it would prepare guidance materials to support implementation of existing policies protecting hydrologic functions. MMAH participates in MOE’s working group developing these materials.

The PPS provides that no development shall occur in provincially significant wetlands (PSWs). Through the Official Plan approval process, MMAH and MNR review whether PSWs are identified and protected. Planning application proponents must evaluate any unevaluated wetlands (if they wish to develop lands adjacent to the wetland), and MNR must approve any wetland evaluation. The province has gone to the Ontario Municipal Board to protect PSWs from development.

The PPS applies a systems approach to land use planning province wide. Acts that protect specified areas of concern, such as the *Greenbelt Act*, the *Oak Ridges Moraine Conservation Act* and the *Lake Simcoe Protection Act, 2008*, build on PPS protections while providing detail appropriate for those areas. The proposed PPS performance monitoring program includes a variety of indicators, including for wetlands and woodlands. The indicators measure both official plan policies and on-the-ground information and may evolve over time.

Ministry of Natural Resources:

On May 28, 2009 MNR posted the draft second edition Natural Heritage Reference Manual on the Environmental Registry for public review and comment. Through this update, MNR is promoting the protection of natural heritage by providing municipalities and others with new guidance that supports planning decisions for a healthier, greener Ontario.

As a result of the Premier’s commitment to update the Aggregate Resource of Southern Ontario – a State of the Resources Study (1992) MNR is developing six papers on various themes related to aggregates. The focus of Paper 3: Value of Aggregates includes an assessment of environmental costs/impacts of aggregate extraction on selected features of the natural environment in Ontario. The paper will review the last 30 new licences issued in southern Ontario to determine if there is any loss or to what extent there is a loss of environmental features (wetlands, woodlands) or agricultural lands.

3.2 Lake Simcoe: The Province Steps In

Ministry of the Environment:

Ontario took major steps in watershed-based planning by passing the *Lake Simcoe Protection Act, 2008*, and bringing into effect the Lake Simcoe Protection Plan. The Act and Plan require municipal/provincial governments and agencies to apply policies and fulfill actions to achieve targets. The Plan builds on existing province-wide protections provided in Ontario, including the *Clean Water Act, 2006*.

This Plan has legal effect. The Plan is also adaptive, which is critical given significant planned population growth to ensure development is sustainable. Ongoing science and monitoring ensure the Plan progresses towards its targets/objectives. The Plan commits the province and other public bodies to continue efforts to protect the Lake, including: municipal water conservation targets and plans; a phosphorus reduction strategy and a feasibility study for water quality trading; regulations supporting protection of shoreline areas; and, ongoing stewardship.

Ontario will review future planning initiatives to apply knowledge gained from the Act and Plan to expand the policy/information base supporting watershed planning. Decision notices for the discussion document, Act, and Plan were posted on June 18, 2009.

3.3 The Swiss Cheese Syndrome: Pits and Quarries Come in Clusters

Ministry of the Environment:

The Statement of Environmental Values (SEV) lays the foundation and sets the framework for how MOE makes decisions that may significantly impact the environment. MOE is currently reviewing how it applies the principles of its SEV in its environmentally significant decision making, including cumulative effects assessment and the ecosystem approach. MOE is committed to developing the tools, including science, policies and guidelines as well as methods for consideration of cumulative effects.

3.5 Too Close for Comfort: Separation Distances between Industrial Facilities and Residences

Ministry of the Environment:

MOE has taken strong action to address odour and noise impacts including issuing a Control Order requiring implementation of odour and noise abatement measures. The company voluntarily shut down its operations June 30, 2009 to implement the odour abatement measures, and has prepared a start-up protocol. The company was charged by MOE, pleaded guilty to violating the *Environmental Protection Act* in June 2009 and was fined \$325,000.

3.6 No Bike Lanes on Bloor: The Bloor Street Transformation Project

Ministry of the Environment:

Class Environmental Assessments (EAs) set out consultation requirements based on project complexity and environmental impact and are developed with significant public consultation. Through the Class EA process, this project was categorized as an A/A+ project, which does not require consultation. MOE has implemented a compliance program ensuring EA process integrity. The program includes annual EA project audits, requires proponents to submit compliance reports, and conducts non-compliance reviews. Non-compliance is brought to the proponents' attention for action. The *Environmental Assessment Act* assesses the environmental impact of projects and is not intended to direct broad-based policies such as the promotion of cycling.

Part 4: Building Resilience in the Protection of Biodiversity and Resources

4.1 Protecting Biodiversity: Ministries Stake Out Roles

Ministry of Natural Resources:

Ontario is championing the conservation of biodiversity through the implementation of the biodiversity strategy. The new *Endangered Species Act (ESA)* is a centre-piece of Ontario's biodiversity efforts. With the passage of the *ESA*, Ontario becomes a North American leader in species at risk protection and recovery offering broader protection for species and their habitats and affords greater support for stewardship efforts of landowners and conservation organizations. Under the Species at Risk Stewardship Fund, Ontario funds almost 120 projects to protect habitat and raise local awareness.

Invasive species are a significant threat to Ontario's biodiversity. Ontario is preparing an Invasive Species Action Plan to identify new priorities for prevention, detection and response. MNR maintains a successful partnership with the Ontario Federation of Anglers and Hunters to raise public awareness of non-native species, monitor their distribution and spread and as appropriate, undertake control measures.

Biodiversity conservation is also being achieved through MNR's effort to promote, market and enhance the protection of natural heritage lands in southern Ontario. This will result in a healthier natural environment and contribute toward a greater public understanding of the connection between their health and well-being, leading to active protection of natural spaces.

MNR is working with the Ontario Biodiversity Council to release the first state of biodiversity report for 2010, the International Year for Biodiversity.

4.2 Amphibian Declines: Canaries in Our Global Coal Mine?

Ministry of Natural Resources:

Under the 1996 federal, provincial and territorial Accord for the Protection of Species at Risk, Ontario committed to monitoring, assessing and regular reporting on the status of the province's wild species. As part of this agreement, Ontario reported on the general status of amphibians in 2000 and 2005 and is currently reviewing and updating information for the 2010 report. This coarse level assessment is used to identify species that may be in trouble or for which more information or additional management attention is needed. Through Ontario's Species at Risk Stewardship Fund, Ontario is providing up to \$78,795 to Ontario Nature in 2009/10 to support development of an Ontario Herpetofaunal Atlas and awareness program. This project will provide an improved and more comprehensive understanding of the occurrence and distribution of amphibians. Concurrently, Ontario is undertaking a preliminary review of current information gathering and management activities related to amphibians and reptile populations. The review will help to assess species status and risks, information gaps and needs that will help to inform and prioritize management actions.

Ministry of Municipal Affairs and Housing:

The Provincial Policy Statement (PPS) does not permit aggregate extraction in significant wetlands south and east of the Canadian Shield, significant coastal wetlands, or significant habitat of endangered and threatened species, and it contains strong restrictions against development and site alteration in other types of natural heritage features and areas (the policies are also applied in the context of other applicable PPS policies). Infrastructure is subject to the Environmental Assessment process.

Infrastructure in the Greenbelt must be approved under the Province's *Environmental Assessment Act*, or similar environmental approval and either support uses and activities permitted within the Greenbelt

or serve the expected growth and economic development beyond, as identified in the Growth Plan. Infrastructure is also subject to conditions such as minimizing the amount of Greenbelt, particularly the Natural Heritage System, traversed and/or occupied, where possible; avoiding key natural heritage and key hydrologic features, where possible; respecting the connectivity of the natural system; and maximizing existing infrastructure capacity and services.

Ministry of Transportation:

MTO appreciates the ECO's recognition of the ministry's Wildlife Mitigation Team. MTO will be pleased to collaborate with MNR and share its experience in wildlife mitigation techniques.

4.3 Forest Biofibre: To Burn or Not To Burn?

Ministry of Natural Resources:

The forest biofibre policy has been prepared to guide new investment which will create jobs in northern and Aboriginal communities, and help Ontario's efforts to build a healthier, more diversified forest sector. MNR bases its policies on the best available science, and strives to find the appropriate balance between social, economic, and environmental demands on forest resources.

MNR and collaborators have actively been conducting biomass harvesting research. We have undertaken modeling and established long-term sample plots over 15 years ago to research the effects of full tree and whole tree harvesting—this includes measurement of soil carbon and nutrient cycling. Ontario is also part of the International Long-Term Soil Productivity Research Network that is examining many aspects of increased forest biomass removal on soil productivity including soil micro-organisms.

Based on comments received on the Environmental Registry and through partnership collaboration, additional direction regarding biofibre harvesting has been included in the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales.

4.4 Protected Areas: Nature Must Come First

Ministry of Natural Resources:

Maintaining ecological integrity is the first priority for protected area planning and management. Today, MNR has a comprehensive and integrated approach to ecological integrity in protected area decision making. It is addressed successively through legislation, strategic direction, provincial policies, manuals and guidelines, site-level management direction for protected areas, and environmental assessments.

For example, the Ontario Protected Area Planning Manual (2009) includes high level direction on integrating ecological integrity into decision making. It also establishes a robust process for preparing management direction (plans and statements) that can be tailored to the planning and consultation needs for each protected area in Ontario. As a result, the important elements of the ecosystem approach are addressed in keeping with MNR's Statement of Environmental Values.

The application of ecological integrity will continue to evolve as our knowledge and understanding of natural and human systems evolve. The five-year review of the Class Environmental Assessment for Provincial Parks and Conservation Reserves in 2010 will incorporate the new understandings and the direction provided in the *Provincial Parks and Conservation Reserves Act, 2006*.

4.5 Soil: Our Eroding Asset

Ministry of Agriculture, Food and Rural Affairs:

Soil conservation is important to the long term success of Ontario's agriculture sector. All soil, agricultural or not, is at some risk of soil erosion. In 2009, observations show that wet conditions experienced in late winter and early spring resulted in higher than normal erosion rates in some parts of the province regardless of tillage practices or the presence of erosion control measures. This has proved to be a reminder that farmers need to remain diligent to protect their soil resources.

The concept of "net soil loss" is implicit in Ontario's current policy of targeting "tolerable loss" of soil. Ontario's policy of "tolerable" soil loss actually targets a net soil loss of zero (i.e. what would naturally be replaced each year). This is typical of most soil management programs in North America. We believe that our present approach is consistent with the ECO's suggestion.

There are many practices, including no-till that assist with managing soil erosion. These include crop rotation, reduced tillage, buffer strips, cover crops, and drainage management. Ontario faces some unique challenges with a broad mix of field and horticultural crops. Farmers also need to address food safety and product quality standards and an acceptable level of production risk. No-till is not viable for much of the horticulture sector. Ontario's cool wet springs and wide variation in soil type reduces the ability to implement no-till across the board.

Some of the ministry's early soil conservation programs were designed to reach innovators/early adopters from the agriculture sector. Farmers are much more knowledgeable about soil erosion than they were 20 years ago. Future programs would need to target a different demographic to be effective.

Soil conservation is an integral part of many of OMAFRA's technical transfer programs which encourage farmers to adopt a range of soil erosion reduction practices. OMAFRA develops a variety of information products (some receiving North American awards) to educate and assist farmers in managing their soils. The ministry continues to update this information to reflect industry/technology changes. OMAFRA is also continuing to update/improve our soils mapping and related information.

4.6 The Pesticide Ban

Ministry of the Environment:

MOE acknowledges the ECO's positive recognition of the ministry's consultation efforts. Through our use of the Environmental Registry, the ministry received a very high number of comments from the public and stakeholders on this initiative.

The ECO noted that MOE should have used the Registry to allow the public to comment on some of the associated documents, including the Pesticide Classification Guideline. The guideline was developed and posted with the decision notice as part of the final regulation. The classification process and criteria were consulted on as part of the draft regulation which was posted to the EBR in Fall 2008. Moving the process and criteria to the guideline, referenced in the regulation, represents a significant improvement directly resulting from public comments received on the draft regulation.

With respect to the consideration of the economic impact of this shift on pesticide applicators, the government did consider the potential impacts on industry and whether a transition period for the requirements would be warranted. The government made its decision with respect to the timing of the implementation after receiving an overwhelming response from the public and stakeholders that supported a rapid implementation of the ban in order to better protect the health of the province's children as quickly as possible. The government's decision was also influenced by the fact that nearly half the province's population was already subject to a municipal pesticides ban, and consumers are increasingly demanding alternatives to conventional pesticides.

4.7 Contaminated Sediment: A Better Assessment Approach

Ministry of the Environment:

MOE appreciates the ECO's supportive comments and recommendations regarding the COA Framework and 2008 MOE Guideline. With respect to the ECO's recommendation for regular policy and science review of the two documents, MOE is currently evaluating the Provincial Sediment Quality Guidelines and developing the methodology to incorporate up-to-date science. MOE welcomes future opportunities to discuss how the sediment guidance has been applied in areas such as Thunder Bay Harbour, Peninsula Harbour, St. Clair River and other locations within the province.

Part 5: Building Resilience in Infrastructure

5.1 Transit Assessments: Is Faster Always Better?

Ministry of the Environment:

Municipalities and public transit proponents assess the need for transit through a transportation master planning process. For example, Metrolinx assesses the need for transit through the Regional Transportation Plan process. These planning exercises are subject to public engagement and scrutiny, where the public has opportunities to raise issues regarding potential social and economic impacts of transit projects.

The regulation was developed to streamline and avoid duplicate planning processes in order to achieve increased public transit. The process focuses on projects with the potential for significant environmental impact. As a result, the regulation provides for provincial oversight to ensure that the natural environment, cultural heritage values, and constitutionally protected aboriginal or treaty rights are protected.

5.2 Landfill Gas Collection and Control Regulation

Ministry of the Environment:

MOE believes it is important to divert organic waste from landfills. Diversion is a waste management priority but it is also important, from a greenhouse gas perspective, to control the methane that is being produced by organic waste already deposited in landfills and likely to continue be deposited in the near term.

5.3 Taking a Byte out of E-Waste: The Waste Electrical and Electronic Equipment (WEEE) Program Plan

Ministry of the Environment:

Ontario is committed to diverting electronic waste, and its potentially toxic components, from landfills. The WEEE program requires producers and manufacturers of electronics to take responsibility for waste resulting from their products. Ontario is the first jurisdiction to set multi-year targets for the reuse and recycling of electronics. The program will provide opportunities across Ontario for individual consumers and businesses to reuse and recycle their end-of-life electronic products, supported by a promotion and education program to encourage participation.

Financial incentives are provided to organizations that collect electronic waste to capture as much as possible. There is an incentive for reuse because program fees are applied solely on new electronics – not on reintroduced electronics. The program establishes stringent operational standards for recyclers to ensure the environment and human health are protected. The program also directs waste electronics to recyclers based on environmental performance (e.g., recycling rate). This approach prioritizes environmental benefits and promotes innovation and continuous improvement within the recycling industry.

Part 6: *EBR* Applications: Some Highlights

6.1 Air Pollution: Hot Spots, Soot, Dust and Smoke

Ministry of the Environment:

MOE takes its responsibility to address air pollutants very seriously, and is committed to developing the long-term tools to support the application of an ecosystem approach, including consideration of cumulative effects. MOE is reviewing how it applies the principles of its SEV, including cumulative effects assessment and the ecosystem approach, in environmentally significant decision making. MOE is reviewing matters raised in the request for review regarding pollution hot spots, and will consider how best to address these issues. MOE is already addressing some areas (e.g. Sarnia airshed).

MOE continues to require industry to identify causes of black fallout within their operational processes and develop solutions to reduce these emissions. MOE and the industry-operated Hamilton Air Monitoring Network (HAMN) have recently invested in additional air monitoring equipment that will be strategically located around the city. This data will assist in better defining sources of fallout. MOE is working with the companies on air standards (through O. Reg. 419) and implementation of population control measures to reduce particulate matter. In June 2009, HAMN launched an Internet site that provides public access to real-time air quality data.

6.2 Water Pollution: Leachate, Sewage and Stormwater

Ministry of the Environment:

MOE works closely with other jurisdictions through the CCME ensuring efforts are coordinated and protective of the environment and human health. Ontario endorsed the Canada-wide Strategy for the Management of Municipal Wastewater Effluent setting out a harmonized framework to manage wastewater discharges and provided national performance standards.

In addressing the Lake Matinenda *EBR* application concerns, MOE continues to work with Algoma Public Health (APH) ensuring water quality remains protected. Sampling does not indicate deteriorating water quality. APH has commenced a survey of residential septic systems resulting in upgrades and improvements to ensure they are functioning properly. MOE is conducting a lake-wide water quality sampling program and supports the efforts of the Lake Partner Program. The results will provide further data on water quality.

Regarding Welcome Waste Management Facility application concerns, MOE is working with the Canadian Nuclear Safety Commission ensuring the facility's operations are protective of the natural environment. Regarding the Cobourg application, work continues with the local health unit and municipality regarding MOE's recommendations for stormwater management.

6.3 Mercury: A Pervasive, Persistent Poison

Ministry of the Environment:

MOE concurs that mercury continues to be an environmental issue. MOE recognizes that mercury and its compounds (e.g., methylmercury) are toxic and bioaccumulative. Mercury and its compounds are being considered as a Phase 1 toxic substance under the Toxics Reduction Strategy.

When reviewing PTTW applications, MOE considers issues beyond water quantity (e.g., potential mercury release). In the instance of the methylmercury application for review, MOE required comprehensive monitoring of mercury and methylmercury, and associated mitigation strategies.

Under the Canada-Ontario Agreement, MOE works with Canada towards elimination of mercury releases to the environment.

Summaries of sources and progress on emissions reduction are provided in annual reports.

MOE will continue programs to help reduce mercury emissions. With its partners, MOE owns and operates three continuous, atmospheric mercury monitors, which measure mercury in ambient air. MOE is also reviewing the Provincial Water Quality Objectives for mercury and methylmercury to ensure the ecosystem is adequately protected.

Ministry of Natural Resources:

MNR uses an adaptive management framework to ensure its land use and resource management policies are regularly reviewed and updated. A critical component of this framework is the consideration and incorporation into policy of the best available scientific information including current research by MNR and others on the relationship between mercury and forest harvesting. Research has also been undertaken across Ontario by both MNR and other groups in the last several years to assess the effects of mercury contamination on fish-eating mammals. MNR, as part of its Ecological Framework for Fisheries Management, recently enhanced our contribution to the provincial monitoring of mercury through the collection of additional fish samples. The results of these efforts and work elsewhere will be used to inform the review of relevant policy and to assess the need for additional or refocused mercury-related research and monitoring.

Ministry of Northern Development and Mines:

The ministry believes that the reform requested by the applicants is not within its mandate. The ministry believes the policy and regulatory reforms related to the formation, mobilization, bioaccumulation and biomagnification of methylmercury in the Boreal forest of northern Ontario are more appropriately dealt with by MOE and MNR.

MNDM introduced the Bill 173, *An Act to Amend the Mining Act*, on April 30th, 2009. If passed, much of the Bill would enable processes that would be developed through regulation, a balanced approach to mineral development that considers a range of interests while supporting a competitive economic climate for the minerals sector.

Some examples of environmental protection areas the Bill would allow the ministry to develop include: exploration activities being subject to stronger environmental rehabilitation requirements, and increased fines and penalties for non-compliance with rehabilitation requirements.

6.4 MNR's Anti-Poaching Hotline: Is It Working?

Ministry of Natural Resources:

The TIPS-MNR resource violation reporting line has demonstrated its effectiveness as a useful enforcement tool. The line has been extremely well used by the public. Since it was introduced, in September 2005, MNR has received over 7,000 calls a year from the public. MNR is expanding our public education initiatives related to MNR's enforcement functions and the TIPS-MNR line. Through these programs, and with the assistance of the public, MNR is working to ensure the sustainability of Ontario's natural resources. The Ontario government has demonstrated its commitment to natural resource sustainability, in part, by increasing MNR enforcement funding by approximately 25 percent since 2002/2003.

6.5 Richmond Landfill Site: Time for Closure

Ministry of the Environment:

MOE did not pursue the application to close the landfill site because a review of the Certificate of Approval and the submitted closure plan was already underway. The ministry felt that initiating a parallel equivalent review would have added no value in addressing the concerns of the applicants or in protecting the environment. The ministry is committed to undertaking an extensive review to address concerns raised by the community.

Part 7: The Environmental Registry

7.1 Quality of Information

Ministry of Energy and Infrastructure:

In addition to being posted on the Environmental Registry, the proposed *Green Energy and Green Economy Act, 2009* (GEGEA) was reviewed by the Standing Committee on General Government. This committee held seven sessions across Ontario, hearing presentations from approximately 130 organizations and individuals and receiving over 300 written submissions. The government put forward several legislative amendments to the GEGEA based on input received through the Registry and Standing Committee. Key amendments included creating a new section to ensure administration of the *Green Energy Act, 2009* promotes community consultation, amending the grounds for appeal under the *Environmental Protection Act* to protect against serious health effects, and allowing buyers to opt out of the home energy audit provisions. Where appropriate, new regulations and policies under the GEGEA will be posted on the Registry.

7.2 Unposted Proposals and Decisions

Environmentally Significant Legislative Amendments by MTO

Ministry of Transportation:

MTO appreciated the ECO's advice regarding public consultation through the Environmental Registry on Bill 163: The *Greater Toronto and Hamilton Area Transit Implementation Act, 2009*. The Act Proposal Notice was posted for a 30-day public comment period. The ministry received no comments in response to this posting.

This legislation built on extensive public consultation undertaken by Metrolinx on its Regional Transportation Plan and a series of two White Papers and seven Green Papers regarding transportation in the Greater Toronto and Hamilton Area.

7.3 Information Notices

Ministry of Natural Resources:

MNR will continue to clearly articulate the rationale for using information notices to inform the public of, and invite comment on, activities that are not prescribed under the *EBR*. The ministry has taken steps to address the ECO's concerns and to ensure that postings to the Environmental Registry related to the ongoing moose program review are posted as proposal notices. The ministry is committed to engage the public in the development of moose policy.

MNR appreciates there is public interest in decisions involving species at risk. We will continue engage the public by voluntarily posting information notices for instruments proposals and decisions not yet prescribed under the *Endangered Species Act*.

Ministry of the Environment:

The Declaration Orders were previously posted to the Registry as proposals for regulations when they were initially developed. The Declaration Orders provide the minister the explicit authority to extend the expiry date. As the orders themselves did not change, the MOE concluded that a new proposal notice was not appropriate, but nonetheless posted an Information Notice to notify public.

7.4 Exception Notices

(No comments from ministries)

7.5 Late Decision Notices and Undecided Proposals

Ministry of Municipal Affairs and Housing:

Matters raised in the consultation notice for Planning Reform posted on June 3, 2004, were addressed by subsequent proposal notices for Bill 51, the *Planning and Conservation Land Statute Law Amendment Act*, 2006. The *EBR* Decision Notice was posted on the Environmental Registry on July 9, 2009.

Ministry of the Environment:

Decision notices for the discussion paper "Protecting Lake Simcoe: Creating Ontario's Strategy for Action", the *Lake Simcoe Protection Act*, 2008, and the Lake Simcoe Protection Plan were posted on the Environmental Registry in June, 2009.

Ministry of Transportation:

The Class Environmental Assessment (EA) for Provincial Transportation Facilities notices references in the table was posted as an information notice under section 6 of the *EBR*. MTO believed its submission of the then new Class EA to MOE for approval would be of interest to members of the public and wished to make the public aware of the post submission consultation on the final draft, as part of the MOE approval process. MTO will post a decision notice.

Ministry of Natural Resources:

MNR plays a lead role in managing fish populations in Ontario. We continue to work closely with international partnerships, local stakeholders and the scientific community to establish fish community objectives for the St. Lawrence River. The 2000 Environmental Registry notice was an important start to that engagement process.

Part 8: Ministry Progress

8.1 Keeping the *EBR* in Sync with New Laws and Government Initiatives

Ministry of the Environment:

MOE is moving to keep the *EBR* current with new initiatives. For example, MOE posted a regulation notice on June 9, 2009 that proposed a number of amendments to keep *EBR* regulations up to date. MOE is also working with other *EBR* ministries to address the remaining issues and will develop a schedule for updating both Ontario Regulation 73/94 (*EBR* General Regulation) and 681/94 (Instrument Classification Regulation).

Ministry of Agriculture, Food and Rural Affairs:

OMAFRA is committed to ensuring public transparency regarding decisions that have the potential to affect the environment. The ministry is currently undertaking a review to ensure that the appropriate legislation, regulations and instruments are prescribed under the *EBR*. The ministry expects to complete this review by the end of this fiscal year and the results will be shared with the ECO.

8.2 Ministry Statements of Environmental Values: One Step Forward...

Ministry of the Environment:

MOE successfully concluded the posting of new Statements of Environmental Values (SEV) for eleven of thirteen *EBR* ministries on the Environmental Registry in October 2008. MOE has since launched a broad review of SEVs which is scheduled for completion in December 2010. This review builds on the recently posted SEVs and will include a review of the basic SEV elements. MOE will consult with the ECO as part of its review process. MOE worked with MGS in preparing its new SEV for posting on the Environmental Registry. MGS's new SEV was posted on July 8, 2009. MOE is also working with MEI as it finalizes its SEV for posting as a result of reorganization.

Concurrently, MOE is reviewing how it applies the principles of its own SEV, including cumulative effects assessment and the ecosystem approach, in its environmental decision making. The conclusions of this review will be incorporated into the comprehensive SEV review process.

Ministry of Government Services:

MGS posted its draft Statement of Environmental Values (SEV) on the Environmental Registry for a 45 day public review and comment period on July 8, 2009. Public comments received will be considered and the final SEV will be posted in fall 2009.

Ministry of Culture:

MCL launched its new Statement of Environmental Values (SEV) as part of MOE's posting of new SEVs for eleven EBR ministries on the Environmental Registry in October 2008. MCL is a participant in MOE's next broad review of SEVs (scheduled for completion in December 2010). This upcoming review will allow our ministry to build on our recently posted SEV through a review of the basic SEV elements. We understand that MOE will consult with the ECO and subject ministries as part of the process.

Ministry of Transportation:

MTO will work in partnership with other ministries toward a consistent approach in the further development of the Statement of Environmental Values.

Ministry of Agriculture, Food and Rural Affairs:

OMAFRA is committed to updating its Statement of Environmental Values (SEV) within the next 12-18 months. Currently, the ministry is working on reviewing and updating its SEV. This review will include the development of OMAFRA's environmental plan which will guide the ministry over the upcoming years in developing environmental policies and ensure transparency regarding decisions that have potential impact on the environment.

8.3 Ministry Responses to Past ECO Recommendations

Crown Land Planning and Management

Ministry of Natural Resources:

The *Public Lands Act* has also been amended through the *Green Energy and Green Economy Act, 2009*. The amendments will help ensure that all the terms and conditions in a document are followed including those that deal with environmental protection. MNR will continue to seek opportunities to enhance the *Public Lands Act* and improve our ability to manage Crown land and protect ecological values and the environment.

The Licensing of Ontario's Zoos

Ministry of Natural Resources:

MNR's mandate is to manage and conserve the province's native wildlife. Under the *Fish and Wildlife Conservation Act (FWCA)* MNR licenses facilities that have wildlife in captivity in order to track their origin and disposition and to ensure they are uniquely identifiable. The Ministry of Community Safety and Correctional Services (MCSCS) is the lead ministry when it comes to the welfare of all animals and in administration of the *Ontario Society for the Prevention of Cruelty to Animals Act (OSPCA Act)*. In view of the improved ability of the revised *OSPCA Act* to address standards of care and standards for enclosures for wildlife in captivity, MNR is examining the potential for harmonizing MNR activities involving captive wildlife (e.g., zoos) with the *OSPCA Act* to realize efficiencies and ensure good public service. MNR continues to work closely with MCSCS in support of a strong and effective animal welfare system in Ontario.

Air Quality Monitoring and Reporting

Ministry of the Environment:

The provincial air monitoring network was established to monitor ambient conditions. MOE recognizes studying air quality in a micro-environment is helpful. Therefore, MOE is funding research to develop fine-scale air quality mapping and forecasting to better reflect street-level air quality.

MOE is also conducting the following new studies:

- A short-term near-highway air monitoring pilot and,
- A measurement of air pollutants fifteen stories above street level.

When requested, the ministry has provided support to municipalities. For example, in 2007 and 2008 the ministry provided modeling and air monitoring advice to Halton Region as well as real-time monitoring and air quality data with mobile and stationary monitors to Ottawa.

Air monitoring in traffic corridors is best led by municipalities; as they have the required data and the local expertise on traffic patterns to effectively design and implement such monitoring. However, the MOE will continue to assist in local air monitoring projects as requested.

Wells Regulation

Ministry of the Environment:

MOE recognized the guidance documents (best management practices manuals) would benefit from stakeholder input. An external stakeholder committee consisting of non-governmental organizations, Conservation Authorities, professional associations and individual well drillers and diggers was established to review and provide comment on the draft best management practices manuals.

The intent of the manuals is to:

- Explain the requirements of the Wells Regulation,
- Provide clarification to the industry and other stakeholders regarding the Wells Regulation, and
- Provide best management practices.

Provincial Solid Waste Management Strategy

Ministry of the Environment:

MOE provides ongoing leadership to municipalities and other stakeholders, by remaining committed to diversion and reduction through a number of initiatives. In 2008/2009, the Municipal Hazardous or Special Waste and Waste Electrical and Electronic Equipment programs were implemented to keep toxic substances and components out of landfills and sewers. Expansions of these programs are also under development. The Used Tires program was also approved to encourage the use of innovative technologies to recycle used tires. The program is scheduled for implementation in September 2009.

MOE is reviewing the *Waste Diversion Act, 2002*, and the Blue Box Program to increase the effectiveness of waste diversion. As part of these reviews, a number of waste management issues are being assessed, including how to entrench Extended Producer Responsibility (EPR) principles; improvements to the Blue Box Program and how to implement EPR programs for diverting waste from the Industrial, Commercial and Institutional (IC&I) sector. Ontario's first priority is reduction, reuse and recycling although there are residual materials for which 3R options are not currently available. Innovation in recovering resources from our waste stream is supported by the ministry.

Smog Reduction

Ministry of the Environment:

Ontario has been working in cooperation with Environment Canada and other provinces to develop and update emission trends. This undertaking includes the update of current reported emission data as well as the re-compilation of past years' (as old as 1990) emission profiles from various industrial, transportation and non-industrial sources with improved emission estimation methodologies and updated statistical information.

Ontario most recently provided updates when the information from Environment Canada's Criteria Air Contaminants (CAC) inventory was last released in 2006. Since then, further revisions and updates are being developed for Ontario emission trends through a collaborative effort between Environment Canada and the MOE. A progress report is anticipated in 2010.

The Greening of the Ontario Government

Ministry of Government Services:

In 2009, MGS will implement a Sustainable Procurement Strategy, including Green Procurement. Identification of high impact spend categories and facilitation of the procurement of green innovations are integral to this strategy.

Ministry of Transportation:

MTO is actively working on a Sustainability Strategy and will be reflecting sustainable principles in the ministry's procurement and third party relationships. The ministry is committed to green approaches in all its activities. Recycling and reuse of reclaimed construction materials is now standard practice within MTO. In addition, MTO has been addressing sustainability in pavement design through several strategies, including long life pavements with 30-50 year service lives. The ministry also established a Green Roads Advisory Committee. The mandate of the committee is to develop a menu of potential changes to MTO's construction practices and specifications, designed to reduce the environmental impact of provincial roadways.

Fisheries Protocol

Ministry of Natural Resources:

MTO has shared the results of the audits with MNR and DFO. We have set priorities and are focusing on corrective actions.

8.4 Ministry Cooperation

(No comments from ministries)

Part 10: Developing Issues

10.1 Nanotechnology: Tiny Particles, Big Risks?

Ministry of the Environment:

MOE follows the progress of international jurisdictions and research councils on regulatory/policy framework development for nanotechnology and research of toxicological testing methods and risk assessment procedures for nanomaterials. The ministry has also initiated work on nanotechnology by funding the following four research projects: investigation of the mobility of nanoparticles in a subsurface environment, development of nanofiltration membranes, removal of contaminants from drinking water using carbon nanofibers, and removal of volatile organic compounds from landfill leachate using nanofiber membranes.

MOE participates in the Canadian committee that contributes to international standards development regarding environmental health and safety of nanomaterials. This committee is part of a formal Working Group which is part of the International Standards Organization (ISO) effort to develop international standards on nanoparticles, nanomaterials and nanotechnology.

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